



**BE-ENKO  
AN-SENGE  
RAKIANI**

**BY**

**Dr. E. S. DOWNS**



Acc. No. 8774

Class No. \_\_\_\_\_ Book No. \_\_\_\_\_

Author Dr. Downes L. S.

Title Psionhia Ankage  
Pakiani

**DISTRICT LIBRARY**  
**EAST GARO HILLS DISTRICT**  
**WILLIAM NAGAR**

---

*Accession No.* \_\_\_\_\_

1. Books may be retained for a period not exceeding *fifteen days* by members.
2. Books may be renewed on request at the discretion of the Librarian.
3. Dog-earing the pages of a book, marking or writing therein with ink or pencil, tearing or taking out its pages or otherwise damaging it will constitute an injury to a book.
4. *Any such injury to a book is a serious offence; Unless the borrower points out the injury at the time of borrowing the book he shall be required to replace the book or pay its price.*

**Help to keep the book fresh and clean**

**BE-ENKO  
AN-SENGE  
RAKIANI**

**BY**

**Dr. E. S. DOWNS**

---

Published by Tura Book Room, West Garo Hills, Meghalaya &  
Printed at Kiran Printers, Athgaon Guwahati 1985.



# JA·PANG KATARANG

## Chapter 1

	Page
AN·SENGANI	1
Rongtalgipa Balwako Rang'sitbo	2
Namgipa Cha'aniko Cha'bo	6
Rongtalgipa Chiko Ringbo	8
Rongtale Dongbo	11
Chu'onge kam ka'bo Aro nanga gita be'enko ranta ka'bo.	15
KENGNIGIPA SAANIRANG	16
Mariki     ...     ...     ...	16
Uri Dal'gipa     ...     ...	17

## Chapter II

AN·CHINGNI BE·EN SAANIRANGKO	
WARACHAKANIRANG	19
An'chingni Be'enni Bigil	19
An'chi	20
Gingtingni chi aro uni ningo donggi- pa Kimil	21
Mesenggipa Bitchi (Hydrochloric Acid)	21
RANGGITIK A·SEL ONG·ANIRANGO	
DAKCHAKANIRANG	23
Wa'al kamani aro uko sanani	23
GrenG Biritchu Ringretani     ...	23
Matarangni gimin     ...     ...	24

(iv)

<b>Greng Be'ani</b>	....	...	25
<b>Greng Biritchu Saani</b>	....	...	26
<b>Chipu Suani</b>	....	...	26
<b>Matburungrang chikani</b>	....	...	28
<b>Bu'su bu'ani</b>	....	...	28
<b>Chio Sripiani</b>	....	...	28
<b>Bija aro gipin Jo'ong chikani</b>	....	...	29

**Chapter III**

**SAANIRANGKO UIANI ARO UARAN  
GKO SANANIRANG**

<b>Girod Minani</b>	....	...	30
<b>Mikron Saani</b>			
(1) Bakgitchak aro bi'sarangni saako sanani			31
(2) Dal'gimin manderangni mik- ron saako sanani			32
(3) Mikskim Saani	...	...	33
(4) Miksmang be'pnap <sup>3</sup> mikron biteko nangpekatani			35
(5) Mikskim Saa			35
(6) Cataract ong'ani			36
(7) Mikguri dinani	....		37
(8) Miknapani	....	....	37
<b>Gitok Saani</b>	....	....	38
<b>Soldi Nangaii</b>	....	....	38
<b>Putguti Saani</b>	---	....	39
<b>Ka'tong Saani</b>	....	....	41

(v)

<b>Ka'sop Saani</b>	....	....	<b>42</b>
<b>Ok Saani</b>	....	....	<b>43</b>
<b>Ok Re'ani</b>			<b>44</b>
(1) Bakgitchakrangni ok re'ani			<b>44</b>
(2) Dal'gimin manderangni ok re'ani			<b>44</b>
(3) Okgitchak Saani	....		<b>45</b>
(4) Mariki			<b>47</b>
<b>SIN'E DING'E SAANI</b>			
Sin'e Ding'e Saako Uiani cholrang			<b>49</b>
(i) Bilonggipako	....	....	<b>50</b>
(ii) Bilonggijako	....	....	<b>51</b>
Sin'e Ding'e Saa Batroroaniko Cham pengni Cholrang			<b>51</b>
<b>BERI BERI SAANI</b>			<b>54</b>
<b>HALDIASOP SAANI</b>			<b>55</b>

**Chapter IV**

**WAGAMRANG**

Bis'arangni Wagamrang			<b>58</b>
Wajong Cha'ani			<b>58</b>
Wajaring Minani			<b>58</b>
Ku'sik Soani			<b>59</b>

**OKNINGO DONGGIPA JO'ONGRANG**

Hook Worm	...	....	<b>60</b>
Round Worm	....	....	<b>63</b>
Whip Worm	....	....	<b>64</b>
Thread Worm	....	....	<b>64</b>





## Chapter I

### AN'SENGANI

Be'en an'senganiara namen nama. Gam gnangeba be'en an'senggija dongana bate kangal ong'e an senge dongan nambata. An'senggipa saa grigipa mande cha'ani somoi ong'on pangnan cha'aniko cha'na ska, aro somoi gita tusina ska. Ua pangnan kusi ong'e katchae dongna ran'a. Gam gnanggipa mande ong'oba be'en an sengjaode, kangal ong'e dongana bateba namjabata. An'senggijagipa mande cha'na sikja, tusina man'ja aro pangnaba kusi ong'na man'ja.

A'gilsako an'senganiko srena gita gamchatbatgipa mamung gam gri. Bang'a sonarangna bate an'senge dongan nambata. An'ching atchion an'senggipa ong'ode maimai cholrangchi pangnan an'senge dongna man'gen, aro atchion an'senggipa ong'jaode maimai cholrangchi an'sengbatna man'gen, sandie nina :

*Mongsonggipa an'sengani niamrang :*

Rongtalgipa balwako rang'sitbo

Namgipa cha'anirangko cha'bo

Rongtalgipa chiko ringbo

Rongtale dongbo

Chu'onge kam ka'bo

Be'en ranta ka'bo

Cha'betbongna aro chuko ringna nang'ja.

Iarangna agreba an'sengani niamrang bang'kuenga, indiba iarangan an'senganina pangchak-

anirang ong'a aro saoba iarangko maniode an'senge janggi tangna man'gen.

An'ching kosako janapbagimin dal'dalbatgipa niamrangni gimin on'tiprakchanchinaskang, saatgipa jo'ongrangni gimin chanchichengna.

An'chingko s'atgipa jo'ongrang chonchon-beani gimin ua'angko mikronarichi nikna man'ja, ind ba uarang janggi tanggipa ong'a aro pilakon donga-balwao, chio, a'ao, bosturango, bairarango, an'ching an'tangtango aro an'chingni cha'anirango. An'chingni rang'sita changantion rit-chani ritcha jo'ongrangko ka'soponika rangsitgalata, aro ritchani ritcha jo'ongrangko rangsitdopila. Uarang mamungba ong'ja ine chanchina nang'ja. Mitam jo'ongrang mamungba ong'janaba donga, Indiba bangan kenbegnigiparang ong'a maina bang'amanderangkon ia siatninggipa jo ongrang, chipurang aro matcharangni chike siata gita bilsiantin siatenga Siatninggipa Jo'ongrang indakgipa jo ongrang ong'a plague, so-ok (consumption), mariki, okgitchak saa. Indakgipa jo'ongrang cha'ani ringaniosan dongaiade ong'ja, indiba rang'sita antion donga: An'ching be'en bilakmitingo sajanaba donga, ind'ba basako sagen uko uisoja. Un' gimin uarang an'chingo nape an'chingko duk on na man'jana gita an'ching gisik rake dongsona nanga.

### **RONGTALGIPA BALWAKO RANGSITBO**

Balwao gas minggni brina, chong'motan Oxygen aro Nitrogen. Oxygen griode mande dikd'ksanaba j'anggi tangna man'ja. Indiba nitrogenkoba nanga, maina oxygen aro nitrogen bring min balwasa mandena rangsittogipa balwa ong'a.

(3)

Sagipa mande brandiko ringna nangode ua uko ringtona gita uni chiko changbri brinna nangenchim. Ua gita Oxygena bilakbeanigimin un baksa uni changbri nitrogenko brinna nanga, ong'jaode uan agre bilkani gimin mandeko siatgen. Oxygen aro nitrogen bringimin balwa baksa gipin gipin bibarang brinon an chingna namgijagipa bibarang ong'kata.

Dal'gipa songjinmarango wa'al so'ani biba ba garkanarangoni biba aro bang'bea manderangni rang sitgalani biba brinenba gipin namgijagipa gasrang ba bibarangko ong'katata, uni gimin songjinmarangona bate uarangni a'palo rongtalbatgipa balwako man'na ama lani a'selan manderang wachio saningbata, maina wachikario namgijagipa bibarang ong'katningbata. Song chonchongiparangona bate songjinmarango namjabata Uni gimin indakgipa namgijagipa balwako man'jana gita songjinmarango donggipa manderang simsakbatna nanga.

On tisa cha aniko donari nangko dring ge'sao chipchage donode, na a ua cha'anibonahaon siangen. Ua gita rongtalgipa balwa napna man'gijagipa dringo mande saksako chipchange donode, ua dringo donggipa oxygen balwa bon nahaon ua mande sigen Balwa hajal git m cubic feet chakgipa dringo oxygen balwa ritchadok cubic feet gnang. Mande saksa kontaprako cubic feet hajal gitamko rang'sitani giminu kontasani ja'mano ua kuturioni oxygen bon'gen aro unon ua dringko seengnikgnok, maina bisi gnanggipa rangsitgalgimin bibarangsang uno dongai-gnok: la be enoni ong'katgipa seenggipa balwakon ba bibakon carbonic acid gas minga.

Nitrogen pangnan apsan dongaia indiba janggi tangatgipa balwako rang'site bon'ata. Saoba ua seenggipa dringona napbaode ua bakan ong'katpilgenchim ba rongtalgipa balwa napchina kelkirangko ogenchim. An'ching a'palo balwa namako rang'site classrango ba banga manderangni dongenggipa kuturio,napaode seengnika, maina uno oxygen aro nitrogen bringipa balwani pal nitrogen aro carbonic acid seenggipa bibasa gapskaaha. Soenggipa bostuoni ba manggisisoni ong'katgipa bibara mikronchi nikna ompilg jag pa soani bigin'chisa onga. Uarang chonchonbea i gimin balwa baksa re'chapaia. Uandakgipako organic matter minga. Rang'siton indakgipako rang'sitchapmana.

Be'enni bigilo moila dongode, chong'motan, ja a, ku'sik, wagamrang, aro ba'rarang rongtaljaode an'ching seenggipa bostu ba organic matterko ba gasko rang'sitchapa. Badita carbonic acid gasko rang'sitata inditan namgijagipa organic matter ba gas un baksa ong'katchapanga. Uarang mandeko siatna gita namgija chu'ongjaoba saknaatna chu'ongbea, chong'motan, sko saa aro gipin gipin ramram saanirangko ong'ata. Na a bisi cha'na aro ringna namnikjawakon, indide bisi ong gipa balwako maina rang'sitgenchim ? Rongtalgipa balwako noko rakina nokni do'gachol aro nokdecholorangko oe rakina nanga.

A'palo balwa namako man'na gita nokningoba balwa namako man'na amdipet joton ka na nanga. Mande bilakgipa aro an'senggipa ong'na skodeunido'gachol aro nokdecholorangko oerakina nanga. Do'ga aro nokdecholorangko oe rakiani gipin namgniba gnang, maina dringona nap-

bagipa balwa manderangni namgijagipa bobil, namgijagipa balwako namnikgipa chonchonbegipa jo'ongrangko siatna man'a. Uani gimin an'ching ja'mano skia man'gen. Uarang manderangni menggonakene kata gita eng'a aro oxygen balwana kata aro jo'ong gnanngipa a'kolo chiko ruato uarangko siata gita seng'a aro oxygen uarangko siata.

Rongtalga pa balwa ine aganon oxygen chu-onge donggipa balwakosan aro bisi gnanngipa gasrang donggijakosan mangsongaija, indiba saanrangko ra'bagipa jo'ongrangba uano dongna nangja. An'senge dongna man'na gita seng'ako aro namgipa balwako man'na gita pangnan simsakna nanga. Salni teng'a balwako rongtalata. Unigimin an'chingni dongchakgipa dringo rongtalagipa balwa dongna nanga. Dringo salg-mikan sal nangkamna nanga inede mangsongja, maina salni dinga jo'ongrangko siata git n an'chingkoba siatnaba donga. Sal agre ding'ani-chiba ma dderangko hajal hajal siata. Mandeni janggiko tangatgipa oxygen balwaba sal ding-beode agre bilakskaa uko rangsitskaode bakan mande sigen. Uni gimin sal ding'ara be'enni-an'senganina ong'oba agre ong'ode bisi ong'pila. Ding'begipa a'songni manderangmangmangba ding'mitingo mamungba pindapani dongjaode sko saa aro gipin gipin saako man'a. Uni gimin an'ching pangnan rongtalgipa balwako rangsitna aro rongtalanina seng'ako nanga ine gisik ra'na nanga.

Be'eno duk man'on ba mande an'sengjaon, ua doctorko okamna nanga. Seng'a napna man-gijagipa dringo seng'ako napna on'en samko

ongipa doctorko okama gita ong'skaa. Senga aro namgipa, rontalgipa balwan sam on'ga.

### NAMGIPA CHA'ANIKO CHA'BO.

Bang'bata manderang man'ode namgipa cha'aniko cha'na ska indiba bang'batan badia rokomko maidake song'e cha'ode namgni ong'gen uija aro simsakja. Somoi g.ta aro ch'ong'e cha'na simsakja. Basakoba agre bang'e, ba'a-koba komie cha'a.

An'ching man'ode jekoba cha'na nangaia indike ong'ja, maina an'chingni be'enni dalro-rcani aro an'engania ia an'chingni cha'anion pangchaka. An'chingni mongsongba gipacha'an'a mai ong'na nangi? ba an'ching maiko cha'ode nambata? Uan jeni je biapo dongani kri, biapni sin'a ding'ani kri ong'na nanga. Manderang pagit hamrangni chaani bidingko cha'ode nambata.

Salgrochi donggipa Eskimo manderang be'en aro mitimko cha'e tanga, ong'jaode uamang indita sin'gipa a'songo dongna man'jawachim, maina ua cha'ani be'enko oing'atna dakchaka, indiba uamang Indiaona re'bae, a'songtangni cha'aniko cha'na jotton ka'ode uamang bakan sagenchim aro Indiani mandeba ua a'songchi re'ange mi, alu aro biterangko cha'ari tangna jotton ka'ode, uaba man'jawachim.

Chasongni chasongna pagitchamrangni cha'bagimin cha'aniko cha'gija gipin cha'aniko cholete cha'e janggi tangna abachengode una namgijani ong'genchim. Ai, misiko cha'e tanggipani de-drang gipinko cha'skana jotton ka'ode uaba apson

man'jawachim. Indake a'song damsani cha'ani a'songgipinni mandena bisi gita ong'sakaa. A'songtangni cha'anian ua a'songni mandena kratatgipa cha'ani ong'a.

Asonge dongaigipa mandena bate kam ka-gipa mandena bang'bata cha'aniko nanga, maina ua uni be'enko kam ka'achi cham'atgiminna kolgapatna chu'onge cha'aniko nanga. Uni cha'anirang chu'ongjaode uni be'en chamangg minko kolgapatna manjaenba uni be'en nom'roroanggen aro ram'begipa ong'e, kam ka'ra amjac cha'na amjawa aro bilgrigen.

Ontiti cha'a mandeko blgriata, indiba agre cha'aba bisi ong'sakaa, indide maidake cha'o nambata? Cha'aniko tiktak cha'jaode mandeni jrima komigen ba batangg n. Unigimin jrima komiroroangode ua chu'onge cha'jaenga ine u'na man'a aro jrima batroroode agre cha'enga ine uina man'a.

Dalmikangenggipa pantena bang'bata cha'aniko nanga. Uamang be'enko dal'oroa'na aro kam ka'e cha'matgiminko kolgapatna nangani gimin okkrininggiparang ong'a Brigim'n mande dal'rorobaja, ua kam ka'o cha'matgiminkosan kolgapatna mangaiani gimin uamang pante damberang gita cha'na man'ja aro okkringninggipa ong'ja.

Changsa cha'aniko cha'manahaoa, somoi ong-gija cha'daptaina nangja, okkriode cha'ani somoio cha'aniko cha'na nanga indiba okkrijaode cha'ani somoi ong'oba cha'srangjaode nama. Mitam manderang agre cha'a aro okkrijaoba cha'aia. Uni gimin manderang ok ramram saa. Ong'telaigipa

bewalan kaketko mesoka aro uni mesoka gita dakjaode ua an'chingna sasti on'ronga. Uni gimin iako gisik ra'na nanga. "Tangna cha'bo. indiba cha'na tangnabe" Kalgrike ba kam ka'eokkriatbo, uni ja'mano okae cha'bo. Unon nang'ni be'enni jrima komiangjawa.

Cha'anio maimai gnang ? Cha'anio ia'ang gnang : oxygen, hyd'ogen, nitrogen, aro carbon. Oxygen aro hydrogen agre chiko nangja. Do'chi bee'n, mi aro dut iarango nitrogen gnang. Chi aro mendi iarango carbon donga.

Bilakgipa mande kamko ka'na man'a aro una cha'aniko salprako seersa adhako nanga, nitrogen chotak sa adha, carbon chotak gniko nanga.

Namgipa me'surang, mi misi aro be'en Indiao gita dinggipa a'songi manderangna nama. maina uarang be'enni ding'ako komia'a. Indiba okna agre ong'jana gita agre bang'e cha'jana gisik rakna nanga. Agre cha'ode cha'giminko jron-gatna neng'a. Me'surangna bate be'en jrongna somoi ruutbate nanga. Be'enko milatgipa bostu samjakrangona bate be'eno bang'bata. Inniba uarangko bang'e cha'rongode beholi saarang ong'katningbata.

Pilak jatan natok, do'chi, dut, on'tisa be'en, bite aro mi iarangko cha'a. Be'enko bang'e cha-gijagiparang tangbangbata. Chuko ringna nangja, indiba basakoba basakobasamna bang'gijako jakal-ronga.

### **RONGTALGIPA CHIKO RINGBO**

An'chingni chiga ringna rongtalgijagipa ong'ode an'ching maiko dakgen ? Chi rongtalbo ba



rongta jabo an'ching uko ritesa ringna nanga. Ritgimin chi rongtalbata aro ringna nambata. An'ching ansenggipa aro bilakgipa ong'e, namgijagipa aro aiao in mangipa rok, mariki, be'en ding'e saa, aro indakgiparangna kenmanjana gita rongtalgipa chiko jakkalna nanga. A'ching cha'ani gri aditana kingking janggi tangna man'a, indiba chi gri dikdikanaba janggi tangna man'jawa. Rongtalgipa chi moilarangko talatgipa ong'a aro uo mamung seengani bisak dongja.

A'ningo sam bolni ja'dilrang, kari aro chunni b'sturang congchapani gimin chi rongtalja. Uaranga organic gita ba jabolni moilarang gita saknaatgipa ong'ja. Uarang ok re'ani biatirangko ong'atoba matchu ki'i aro jabol galdamni moilarang gitade kenani ong'ja.

Jabol dana, matchu ki galdam, ki'gongdam, su'budam aro gure nok indakgiparangoni ka'sne ka'sne sipange chiakolrango ga'akea. Uandakgipachirangko ringmanode basakoba mariki, basakoba okgitchak ba basakobara okni gipin gipin saanirangko man'a. landake saon, doctorrang china kenchakchenge uko nichenga. Indakgipa saaniko ong'atgipaja'ongrangko niahaonchimainiba a's'l bisi ong'aha ine uia aro uko sandie nion b'sakobabasakobasoenggipamanggisirangko chio nikna man'a. Manderang mariki sae siode aro uani gimin sandie niode, mikka china jokgipa chimik'angomande gopramrangdonga ine nikgen.

Ringna skang chiko chichae ritchengode uno donggipa jo'ongrang siahani gimin mamung ong'jaha. Chikrkgipa matchako manderang so'otna joton ka'jode, ua songgimikkon nisinaba donga. Unandakechioni ong'chongba gipinoni ong'chong

saatgipa jo'ongrangko siatna joton ka'jaode ua bang'a manderangko nisina man'a. Uni gimin ringani china simsakna nanga aro uarangchi saatako man'jana gita ringna skang chiko name ritna nanga. Chi rongtalbo ba rongtaljabo, ba chio donggipa jo'ongrang mandeko siatgipa ong'bo ba ong'jabo, ringna aro su'srangnaba ritgimin chiko jakalode nambata. Matchu sokoba chio gitan jo'ongrang napani gimin manderang matchu sokonikoba bisiko man'ronga. Uni gimin matchu sokkoba ringna skang name ritchengna nanga.

Aticani salgipengo dakgrikani ong'm'itingo sipairang guli nange siana bate, rongtalgijagipa chiko ringe rokom rokom saaniko man'e sigiparangan bang'batachim. Indake chikong damsa mangmang bobilni sipai dolna bate manderangko sia aha.

Indiani manderang chiakolrang aro pokri'angko rongtale rakijani gimin ok re'a, okgitchak saa, he'en ding'e saa aro ok chike saa aro indakgipa saanirangko man'ningbata. Saoba simsakgija chiakol ba pokriko rongtalgija dake jakale jinmana bisiko chipato te indakgipanasastiko on'nananga. Chiakolni a'palo mamung namgijako nikjanaba donga, indiba ning'chi moila dongna man'a Chia-kolni ka'mao mai gnang? Chiakolni ba pokkrini sepango mande gopram, jabol galdam, su'budam aro ki'gongdam dongode chiakolni chio jo'ong gnanggipa moilarang ga'akea.

Bang'a songrangni chiakolrang aro ringani pokrirang rangtaljasrang. Songni manderang uni samtangtangchi bang'a moilarangko daka, chong'motan matchu ki'i gala, noksuri galchipa aro mande gopa. Uni gimin songo mariki saa ga-

akon Sorkari pilakna skang ua songko rongtalat-chengchina songni skotonggiparanko ge'etina.

Chiakolni chiko rongtale rakina maik dakna nanga? Chiakolko rong alatna permangana'e potash sam nama ine uiman'aha. Uko pilak sam palgiparagoniko man'na ama aro uni dam rakja. Uko baltino chi baksa sim'enba name gon'gone jrongate chiko'o pakatna nanga. Chiakolni chi gimik kanta kolgrikbrina kingkingitchake dongahade uan chu'onggnok. Ua chi pingpinon grikpilgen. Chi guchakmitingo bang'a mande-rangan ringna seengnika indiba uan mamung namgijani ong'ja. Thanao donggipa policerang uaranko jakalanini gimin mesokna nanga. Songo marikisokoncha'chak ringchakanirangkouaapsan samchin su'srangode nambata.

Chiakolni chi ong'bo ba ringna ko'e dongimin basingrangni chi ong'bo uaranko name pindape donna nanga. Ia pilak cholrangna bateba chiko ite cheke jakalan nambatgipa chol ong'a.

## RONGTALE DONGBO

Rongtal antalan ara an'sengan'na minga dalgipa niam ong'a. Rongtale donga ine inon be'en bimangkosan rongtale rakianiko mangsongaija, indiba be'enni bakanti, wagamrang mikronrang, gingting, aro nang'ni gana chinanirang aro nang'ni n'kn samtangtangchi donggipa pilak biapko rongtalanikoba mangsonga.

Moila mai? Uan bostuni kragijagipa biapo dongani ong'a. chong'motan, matchu k'ko bari gale soatode uan nambegipa a'sal ong'a aro uano me'suranko ge'ode silbea, indiba matchu k'-

ko an'chingni nekona ra'bae donode, uan maiba namgni ong'ani pal nokko moilasa ong'ataigen. Indakgiparangna an'ching simsakna nanga. An'chingni cha'tonikbegipa mitaiko an'chingni ba'rarango nongode uaba ba'rako moila ong'atanina agre mamung namgni dongjawa.

Be'enko rong ale rakijaode balwa jokruraani chonchong pa a'kolrangko be'enni an'chinek p ng'a unon jok galna nagnigipa moilaka champenga aro be'enko an'sengatja.

Jo'ongrang moilako namnika. Sabon moilako rongtalata aro jo'ongrangkoba moila baksa manchapa Indiani manderang be'enaro wagamrangko rongtalatna bimchipa, ian bebe, indiba iako gisik ra'na nanga, chongmotan, chi ka'sinao moila, to, aro mitim gnanggipa moilarang talbreja aro uan jo'ongrangkoba siatja. Maiba chi ra'chakanio auchakode uko altuae nikna man'gen. Uni gimin chi bo'om bo'om dakachi sabon nonge auna man'ode namtata. Chi ding'a aro sabon mandeko saatgnirango nikoba champengna dakchaka.

A'gilsako an'talgijagipa manderang sai sibata ine aganna manjaoda, uamang saako maningbata aro siningbata ine aganna man'a. Be'enko salanti auoba rongtal jagipa ba'rarangko gano chinode namgni gri, maina ba'rarangko gano chinode nangtaie, be'enko moila ong'attaia. An'talgijagiparango tikpitrang donga aro ma'manti be'enni ba'bigini biatirangko man'ronga. Su'na man'gipa ba'rangko su'rongna nanga aro bosturangkoba su'srangna man'giparangkode su's'angna nanga. Indiba je bosturangko su'srangna man'ja ua'angko pangnan salo ramskana nanga.

Bang'a manderang rongtale gana chinanina  
simsakjani g'min moilakoba nikja g ta ong'aia.

Seengg'pa bisak kengnigipa ong'a. Uarangko  
uina an'chingna g'ngtingko on'aha. Moila g'ng-  
gipa aro seenggipa ba'rarang sa'na kenchakbeani  
aro mitchiani ong'a Manderangni ba bi'arangni  
skoo an chinek ba moila bang'ode uk jelgen aro  
knio bitchirang banggen. Ua tik bitchirangko  
chi ding'achi gimaatna man'jawa, uarangko kero-  
sinechi ropope ja'mano chi ding'achi auegalode  
uarang bo'olgen aro rongpogen. Unon skooni  
tikrang bakbakan gimagen. Rongtalanian mandeko  
gisik seng'atani ong'a.

Be'enni biqil—Be'enko rongtale rakina nanga  
ine aganode bigilko rongtale rakina nanga ine  
mangsonga. Bigil be'enko pingopgipa ong'a. Bi-  
gil mitapgni donga ; kosakogipako Epidermis  
aro ning'ogipako Dermis minga. Epidermis uiani  
ja'dilrangdongjani gimin saako uina man'ja aro  
uan namen ba'begipa ong'a. Dermis uiani ja-  
dilrang aro an'chi ja'dilrangan gapani gim'n  
on'tisa matoba aropinku'chotnangmangchion'ti a  
su'atoba unoni an'chi ong'abara aro saako uia.

Dermis kimilni ja'dilrang donga. Un ni  
gramchi ong'akate kosakgipa bigilo donggipa hajal  
hajal bang'gipa a'kolrangko jokpretbara aro to  
ong'kate bigilko rinoke rakia ong'jaode bigilran'e  
bretgenchim.

Gramchi kari nanggipa chi ong'a aro seenga.  
Dal milkkangengmiting. mandeoni gramchi sal-  
prako seer sa ong'kata. Bilonge kam ka'ode una  
bateba ong'kata. To bang'bate ong'ka'on an'  
chinek bang'a aro an'kalting seenga. To bang'e

ong'katode an'chinek ong'e a'kolrangko penga. Unin bigil'ni rokrangko ong'ka'ate bigilko kasi cha'a'ang ong'katata.

Bigil be enni n'ing'ni bakrangko rakigipa ong'a. Ua namgijagipa elastic ong'ani gimin ning'o donggi'a bakrangko name rakia. Uchin an'ching nan 'dike raka, noma, rinoka, ka'sina aro dongako uina man'a. Be'enni moila gramchi baksa jokanga uni gimin uaba be'enko rogtalatani mingsa chol gita ong'a aro unbaksa be'enni agre sin'a ding'akoba tik rakigipa ong'a.

Ian mingsa mongsongbatgipa ong'ani gim'in an' gimin talbate uina nanga, chong'motan be'en ding'on maina gramchia aro uan an'chingna mai mai ramgn'rangko on'a ? Pang au bigilko cing'e rakina gita bigilni ning'o donggi'pa an'chi ja dil'la' go ding'gipa an'chi donga. Uni gimin sil-grakko sio uni ding'ako balwachi ka'sinatna gita be'enko ka'sinate rakina gita an'chioni jokbagipa ding'gipa chiko mandeni bigilo balwachi ka'sinata. Una agreba gramchi baksa organic matter aro acid jronge biba ong'ate bigilko ran'ata aro ka'sinata. Ran'gipa balwa, bibako salope ding'gipako man'chapahani gimin uaba bigilko ka'sinate. Uni gimin a'senggipani be'enko toe niode be'wal gita ong'aia. Wa'alko so'chakgipa chankoloni ma'kai pangnan ding'gipa biba ong'katenga ta gitan be'enon ba pangnan ding'gipa biba ong'katenga. Beben uno wal'ku aro wal'sare gri. Ka'sopo oxygen balwa an'chi baksa brina. laba d'ing'ani ja'pang mingsa ong'a. Ua ding'gipa biapni an'chi be'en gimikchi jokange, kam ka'e ba ka'grike champengatgimin moilako, an'chingni jabolrangko so e gala gita kame mon'atskaenga

# **CHU·ONGE KAM KA·BO ARO NANGA GITA. BE·ENKO RANTA KA·BO**

Jakalgija maram cha'e galana bate jakale a hokan nambata. Maiba jakalani bostuko galchipodeua aditani ja'mano maram cha'e mamungba cholijawachim. Indiba uko krae namedake jakalode, ua ruutana kingkingan baigen. Ugitan. aosan, mamungkoba dakgija tom'tom asonge roaigipa mandena bate bilchi jakchi ong'chong ba gisikchi ong'chong kam ka'begipa mande tangbangb tgen. Uan an'sengbatgen aro katchabatgen aro mandeskanaba jakalani ba dakchani ong'batgen.

An'senganina maina kam ka'ako ba be'enko ranta ka'e neng'takako nanga ? Uni a'sel bang'a aro uarugoni mongsongbatgiparangko ka'mao mesoka.

Kam ka'on manderang labna ong'bo, silchidarechi ong'bo, ba katchaaniko man'na mangmang robolbaugitagipinkal'grikanirangko kal'bo gong'rakbate rang'sita. Iachi bang'bata balwako ka'sop'argona chipata aro galata. Unon gital gital balwako man'an' gimin ka'soprang rongtalbata.

Kam ka'on ba ranta ka'e neng'aton, an'ching ding'ola a o neng'ate ding'olanin nambea. Uan an'hiko rongtalda'ata, maina ding'ol tingtotprakan gal'imin namgijabgipa moila ong'a. Indake ding'olatachi moilako ga'atna dakchaka.

Kam ka'an' aro be'enko ranta ka'e neng'atani nambea, maina ua be'enni pilak bakrangko kam ka'ata aro indake uarangko bilakata. Unon an'chi ding'a aro ta'rakbate jokruræ mandeko

ansengata. Unigimin kamka'gipa ba be'enko ranta ka'e neng'atgipa mande okrironga, walo tusinapa, aro kusi ong'ronggipa ong'a. larangan an'sengani chin'ang ong'a. Indiba kam ka'gija indin arate roaigipa ba be'enko n'ng'atgijagipa mande okrija, walo tusina man'rongja, sko saa, ok tik ong'ja. Uan an'senggijagipa mande ong'a.

### KENGNI GIPA SAANIRNG

Mariki : Mariki saa siatninggipa saanirangoni mingsa ong'a. Ia saaniba gipin gipin biatirang gitan moila aro sogipa bosturangonin ong'kata. Europe a'songo indakgipa saani ang ong'katoba uamang sim'akb'ani gimin jelna man'ja.

Mariki saani chin mongsong ok re'a aro chisata. Ia ong'ani inditan bilonga aro bilaka, sagipa rang'sanan siaia. Marikini jo'ongrangko chioniko man'rongbata. Jabol soa, matchu ki'a galdam, ki'gongdam iarangan mariki jo'ongni namnikgipa n'lrang ong'a Jensalo mikka waa, unon is biaprangoniko jo'ongrangko mikka chio man'chapange sepaggipachiakoloba chiringrango donea, uandakgipa ch'ko ringmanon mariki saako man'a. Uni gimin songni manderang uamangni chiga'naba chikolrang na'indakgipa moilarangko jokpakg pa chisol ga'akejana gita gisik rake aro simsake nirokna nanga, aro uarangni sepanggipa-oniko indongarangko chel'atna nanga. Doctorsok-bana skang meseng bitchirangko kansoode nama, chong'motan, sirka, te'matchi aro man'ode sulphuric acid aro aciatic acid iaranggni mingsako man'ode uko tingtot chikung bachi'bongako chi brine sagipana kanatna nanga.

Mariki sagipa mandeni tuchakan'ko, uni ch'ise-



tako are a'pal re'aragngkoba jo'ongrangko siatna man'gipa samchi rudapna nanga. Indaka saako man'o sigipa mandekochionichei'gipa biaposaso'e ba gope galna nanga. Mariki saako sagipa an'tangni gana chinarangko samo sim'bolna nangaaro jakparngkobasamon namejaksuna nanga Jensalo mariki saa ong'kata unon biterangko cha'jaode nambata. Mingipa biterang namjabata raina uarangko cha'on ok saa. Mariki sami-tingo okko ding'e rakiode namba'a. Jrongning-gpa cha'aniko cha'ode aro chiko rite ringode ua saako man'na kenchakani bang'brejawa.

### URI DAL·GIPA

Uri da'gipa namen kenbegnigipa saani ong'a. Ua saanio bilsiprako hajalni hajal mnderang' sironga. Ua saako man'gipa sijaoba mikang dakjea aro kana ong'a.

Pilak jaten uri saa donga, indiba Europe a'songona bate Africani saliram jolnimanderango ua saa bang'bata.

Uri saa a'bachengon sko saa, jak ja'arang saa ka'rika, be'en ding'a aro an'moa, sana a'bachengon mikkango aro gitoko gangma naa gita nachenga. Unon ja'a jak, un koa be'enrang-oba nagen aro nagimin minenba pari ong'gen. Mongsongde sagiparang agre be'en ding'ani gimin ka'sop ding'e, be'en bilgri ong'e siningbata Sagipa sigija nampiloba, mikkang bimang dak-jesranga. Saobarang kana ong'a ba parini dak rara daka.

Uri saa batningbegipa saa ong'ani gimin simsakbena nanga. Uko chmpengna gita bi'sa

chonengmitingon tika su'na nangchongmota.  
 Da'ororo England a'songouri saadongjasrangaha.  
 Uni gimin indakgipa saa ong'katajana gita bil-  
 sianti tika su'taitaina narga. Uri naako man'  
 kugijagipa mande tika su'gija uri saenggipa mande  
 baksa dongpaode aro uko sanode, uaba apsan  
 saako man'chongmotgen, maina ua sagipaoni jo'-  
 ongrangko balwa baksa rang'sitchapa.

Mande sakanti tika su'na sin sakode, uri  
 saani bakbakan gimaanggen.

---

## CHAPTER II

### AN'CHINGNI BE'ENNI SAANIRANGKO WARACHAKANIRANG

Isol an'chingni bimanrangko namedake dakaha ine an'ching uina man'gen. An'chingni bimanrangko aro uni mingprak bakrangko maikai aro maina dakaha uko an'ching ru'uta bilsirangna sandienieuina man'ode ia Isolni dal'begipa kamni gimin an'ching aiao inmanenchim. An'chingni be'entrangko ka'mao mesokgipa minggnichi name rakina man'gen : ( 1 ) Saaniko sam gri warachakani (2 Samchi saanirangko warachakani.

#### AN'CHINGNI BE'ENNI BIGIL :-

Ia b'gil adita su'uta, ri'chaa aro grinning-jawa. Ua an'chingni be'enna namgipa pindapan ong'a, aro uko matatjaodesaatgipa jo'ongrang bigil gita napangna nam'jawa. Indiba an'chingni bigilo bang'bea chonchongipa a'kolrang donga ; rokomsa ding'olni a'kolrang, rokom pipin mitimni ba toni. a'kolrang donga. An'ching ding'ode ding'olni a'kolrangoni chi aro bisi bang'e jokgen, indiba bang'gija gramchi ua a'kolrangoni pangnan jokronga. Ua chi ba ding'ol pangnan jokani gimin jo'ongrang ua a'kolrang gita napna man'ningjawa maina uachi jo'ongrangko balpakpil'atgen. Indiba an'chingni bigilo moila dongode basakoba basakoba ua a'kolrangko penggen aro chi ba bisi jokangna man'jawa. Unon jo'ongrang ka'sne ka'sne napna man'gen. Basakoba basakoba an'ching an'chingni bigilrangko smatatgen ba uko bretatgen, unon an'chingni-skanggipa warachakaniko chongmotan bigilko an'.

ching indake gimaatahaode, an'ching gnigipa warachakanio pangchakna nanga. Ua gnigipa warachakani an'chi ong'a.

### AN'CHI

An'chingni be'enni bak kolgrikni baksa an'chi ong'a. Mande muan gni jrimode an'chi seer bri ong'skang-n. An'chigni an'chiko niode gi'ch kg pa bitchi gita nikaigen indiba uan inuake ong'ja. An'chiko pialao donode ja'mano gitchakgipatinkagen aro gipok ba'imi gipa bitchi, uko duule donggen Gitchak tinkagimin an'chio gitchakgipa cell-rang ba chonchongipa bite gita dakgipa donggen ind ba gipokgipa bitchio gipokgipa cell-rang donga. Ia gipokgipa cell-rang saatgipa jo'ongrangko siatna man'a. Ua cell-rang be'euna warachakgipa sipai ba police gita ong'a An'chingni bigilko matode bang'bea gipokgipa cell-rang mataniona re'bagen aro jo'ongrang napode uarang baksa dakgrike uarangko cha'gen. Agre bang'bee jo'ongrang napode basakoba basakoba ua gipokgipa cellrangko ame siatgen Indake dakode minsu ong'katgen maina m nsuosigim ngipokg pacellrang jo'ongrangbaksa donga. Indiba an'chingni be'en bang'bata gipokgipacellrangkodake ua ming pa p richi ua angko watatgen. Unikoa ua gipokgipa cellrang jo'ongrangko ame siatode par'ko namatgen. A'kangni manderang indake aganode an'ching uko bebe ra'jawachim, indiba da'ororo uko uichongmo a maina microscope-chi uko nikna man'a.

Basakoba basakoba be'enni bilgriani gimin gipokgipacellrangkochu'ongedaknaman'jawa, un-onjo'ongrang be'en gimiko nape mandeko siatgen

An'chingni an'chini chongipa tingtotsao git-  
chakgipa cellrang lak sotbonga donga. Aro gi-  
pokgipa cellrang hajal chet ba gitchakgipa cell-  
rangni bak ritcha dokni bak sa donga. Indiba  
girot, putguti ba gipin gipin saanirang saode  
gipkogipacellrangbang'batgen chong'motan ting-  
totsaocellrang hajal chidok ba hajal kolatchi dake  
donggen.

### GINGTINGNI CHI ARO UNI NING'O DONGGIPA KIMIL

Balwao pangnan a'd'mu donga aro a'dimuo  
jo'ongrang dongronga, indiba an'ching indakgipa  
balwako rang sitoba bang'bea a'd'mu ka'sopona  
sokangjawa maina ua gingtingni chi baksa ma'-  
gapgen aro gingtingni a'kolo donggipa kimil  
chekrigen.

Uni gimin indake ka'sopni saanirngko an'-  
chingni be'en warachaka. An'chingni ku'sik aro  
gingtingo bang'bea jo'ongrang dongronga indiba  
an'ching an'sengode uarang be'eno napna man'-  
jawa. Indiba be'en an'sengjoade ba ag e  
ka'sinatako man'ode an'ching bilgriani g min ua  
jo'ongrang napna man'gen, unon soldi, gitok  
saa aro putguti saa ong'katnaba donga.

An'chingni gitoko aro gingtingni ramao grong-  
rang donga ( tonsils ba nala minga ). Ia grong-  
rango bang'bea dalgipa gipokgipa an'chini cell-  
rang donga. Uni gimin jo'ongrang napna joton  
ka'ode ua cellrang uarangko cha'e siatgen.

### MESENG BITCHI ( HYDROCHLORIC ACID )

Ab'chingni cha'ani aro ringanio bang'bea

jo'ongrang donga, uni gimin bang'bea okona napronga. Indiba uarang atomona sokchenge be'enni warachakaniko gronggen. Uano an'chingni be'en jo'ongrangko warachakgen maina atomo bilakgipa, me'enggipa bitchi (hydrochloric acid) donga. Bang'bataia acid-chisatakoman'-gen indiba basakoba basakoba jrunggijagipa cha'ani baksa atomko nappake bibikrangona sokanggen.

Acid atomo dongchongmota ine pilakan uina man'gen, maina mande ka'rekode ba wakgalode meseng bitchi atomoni ku'sikona ong'katgen. Acid cha'aniko jrongatna dakchaka.

Basakoba basakoba bisi ba namgija cha'ani atomo napode mande ka'reke wakgalgen. An'chingni be'en indakachiba warachakgen, maina bisiko indake chigalode ua be'eno napna man'jawa aro mande agre sajwa.

Atomo dorggipa acid jo'ongrangko siatna man'jaode ba namgija cha'ani ba bisi bibikrango napode an'chingni be'en wara hakna man'kugen. Maikai bisi ba jo'ongrang ba namgija cha'ani napode bibikrangmobegen, unonok-re'ger. Indake an'chingni be'en bisiko galatna joton ka'gen.

Jo'ongrang bibikrango jelbegen unode uko galatna joton ka'b oba man'janaba donga. Unon jo'ongrang pariko dakatgen aro okgitcak saani ong'katgen. Ramram okgitcak saaniko be'en antangan ruute joton ka'ode namatna man'gen, indiba gip n rokom ongitchak saode namatna man'ngjawa.

Cholera jo'ongrang bibikrango napode namen jlsranganigiminaro unibisibakbakan'chio napani gimin be'en antangko namatna neng'sranggen..

# RANGGITIK A·SEL ONG·ANIRANGO DAKCHAKANIRANG WA·AL KAMANI ARO TAPPINGANI

Mandeko wa'al kamode pilakna skang soda bi-carbonate (soda ba katchi) on'tisako chi baksa brine nom'atenba tapbo. Unikoa saa komion ritgimin rongtalgipa chichi samsake su'srangbo. Unon boric ointment-ko nongbo. Kama bang'ode salanti potassium permanganate-ko chio jrongate ua chichi su'srangbo. Su'srangani ja'mano castor oil baksa boric acid-ko brine nongode namgen. Kamani pariko ba'ra gri bang'bang donode nam-bata, indiba moila aro tampirang bang'beani gimin rongtalgipa ba'rachi wenwenna nanga.

Kamani parioko tarina skangtappingechi dong-ode uko raponge galna nanga. Salantio kamani pariko tariiataibo. Rongtalbegipa ba'rako jak-kalna nanga maina moila dongode kamani pario minsu aro bisi donggen aro pari namningjawa.

## GRENG BIRITCHU RINGRETANI

Ja'si ba jaksi ringretode rang'san uko name-dake salpoke srongatosa namgen. Chengkna ringretode mande ku'kipna man'jawa. Indake ong'ode gipin mande unijaksimarangko uni kusik ningchi sikate chengkna samgnio donbo. Unon chengkna ka'machipak sinjete janggilchina sikatbo. Indake dakode bakbakan nampiltaigen. Un'koa salsa ba salgnina kingking ku'sikko ba'rachi katipbo.

Gipin dal'gipa biritchurang ringretode aro uko namatna man'jaode mandeko rangsan doc-

torchirimbabo maina ruutode namatna nengbata.

### MATARANGNI GIMIN

An'ching an'chingni be'enko matatode aro uno dal'gipa an'chini ja'dil dongjaode tincture iodine-ko nongode namgen. Unikoa matani pariko rongtalgipa ba'rachi wenwenbo

An'chini ja'dilko matode adita bang'a an'chi gogen aro ua an'chi gi'chakbeg n Basakoba basakoba rongtalgipa ba'rako jako ra'e m nute bonga ba minute chikungna on'tisaba ogija namedake sinjetode tipgen. Maina minute bonga ba minute chikungna tomtom dengode an'chi tin' kagen.

Jakoni an'chini ja'dil dalgipako matode jakpongo ba'rachi ba buduchi olgroke kabo. Unon jakpongni kamachipak wenjetna mn'na gita dakgipa ro'ong ba go'olko bara ba budu ning'o done jakpongni kosakchipak rakgipa go'olko sikprotbo. Unikoa kag pa ba'ra ba budu ketketjana kingking ua gol'dikko wilwilbo. Ketketode be'enoni an'chi jakona jokangna man'java. Uni gimin matani pario an'chi dongjava, indake an'chi tipgen. Indiba indake ruute kae rakiode an'chi jokjani gimin jak namjava aro ruutgijan sogen. Uni gimin minute kolgrik ba adha kantani ja'mao ua wengimin ba'ra ba buduko engna nanga. Unon an'chi joktaiode kataibo. Ja'ani an'chini ja'dilko matode ja'skuni kosako japingko ba'ra ba buduchi ketket kana nanga. Jasku ba jaskskuni ka'mao indake kaode namgni dongjava. Maina an'chi greng gegnini gisepkosa jokruraa. Indiba jakpong ba ja'pingko rake kaode namgen maina



uno greng ge'sasan dongaiani gimin ua ja'dilko sinjetna man'e an'chiko tipatgen.

Be'en ba skoko matode matani pario rongtalgipa kilchapko tapbo aro uko ba'rachi ketkete wenwenbo.

## GRENG BE'ANI

Greng be'oce sabegen aro uko il'engatode sabatbegen. Rim'e n ode ua be'gimin greng-rangni natgrikako uina man'gen. aro be'gimin grengde gonggegen.

Be'gimin grengrangko rokom gni dake sualna man'a.

(1) Grengmangmansan be'chipilaia. (2) Greng be'ani gimin be en aro bigilko mata. Skang-gipa be'rniko ramram be'ani minga. Gnigipa be'aniko matgipa be'ani minga.

Skangippa be'ani gita ong ode ua be'gimin grengko skang gita srongatna joton ka'bo. Unikoa kilchapko duule done samgnio bolplengko donbo. Unikca bop'engrangko ba'rachi name-dake wenwenbo. Indiba simsakna nanga maina agreketkete wenwenode an'chi jokrurana man'jani gimin namjawa. Fa'akoba basakoba wenwenani ja'mano be'en ripomani gimin wengimin ba'ra agre ketketgen. Uni g min greng saode salsani ja'mano kaako engbo unikoa wenwentaibo. Uni ja'mano tom'tombe rakibo.

Be'gimin greng bigilko naprotode namjabea maina moila ningo napgen aro minsu ong'katgen. Minsu dongode namatna man'ningjawa. Uni gimin indake be'ode ua matani pariko iodine ba peroxide-chi ba'rako ra'e chi gri namedake su-

srangbo. Unon alcoholchi su'srangtaibo. Unikoa rongtalgipa kilchapchi pindape grengko srong-atbo aro kosako aganbagimin gita taribo.

Be'gimin grengko namatna anti dok ba a gni nanga. Bi'sani greng namningbata indiba bugepani greng be'ode ka'sne ka'snesa namgen.

Greng be'ode ia mongsongbatgipa katarangko gisik ra'na nanga.

(1) Skang gita srongatna joton ka'bo.

(4) Tom'tombee rakibo.

(3) Anti dokna kingking moatna nangja.

Dal'gipa greng be'ode hospitalchi re'bana man'ode nambatgen maina basakoba basakoba grengko name dake tarina man'jani gimin ua kan'-dikgen ba srongjawa.

### GRENG BIRITCHU SAANI

Greng biritchurangko agre bikpilode be'enni ja'dilrang sabegen. Basakoba basakoba ja'dilrang chotgen. Indake saode pilakna skang ka'singipa chiko uno pangnan rudapbo. Adha kantani jamano chi dingachi sim'bo, ua chi chakchikna ama gita dinggipa ong'na nanga. Unon chi ka'sinako rudaptaibo. Unikoa ba'rachi namedake wenwenbo aro uko tom'tome rakibo. Ripomani komion tochi ba leniment-chi ka'sinbeen nongna nanga.

### CHIPU SUANI

Bisi gnanggipa chipu mandeko suode ken-beani ong'a aro una rangsan simsakna nanga. Maina indakgipa chipuni wagam ge'gnio chonggipa a'koldonga. Ia a.kolrango bisi donga. Uni

gimin chipu sumitingo ua bisi mandeo napgen, aro minute 15 ba minute 20-o mandeni be'en gimiko chipgen. Bisi be'en gimiko chipode an'ching uko namatna man'jawa. Unigimin an'ching rang'san bisi chipna man'jana gita champengna nanga. Ua bisi an'chini ja'dil dingding re'angani gimin pilakna skang an'ching ua jadilrangko sinjete peng'na nanga, jako suode jakpongo ba'rachi ba udbuchi olgroke kae go'olko sikkroke ketketjana kingking go'olko wilwilbo. An'ching indake dakode an'chini ja'dilrangko sinjete penge bisi be'en gimiko chipna man'jawa.

Unikoa an'ching ua bisiko jakoniko ong'katatna joton ka'na nanga. Matgipa churichi suani pariko namedake rana nanga. Unon ua ketket wengipa ba'rako anchi jokna man'jana kingking ka'sne ka'sne engna nanga. Indiba be'enchi jokangna man'jawa, ma'na jakonajokbagipa an'chini ja'dil grengni sepango donga indiba jakoni jokanggipa an'chini ja'dil bigilni sepango dongani gimin uko sinjete jakoni jakanggipa an'chiko champengengpiti. Mande man'ode ua raani parioni an'chiko salopode namgen. Unon bisi an'chi baksa jokgen. Indiba bisi bigilo dongkunaba donga. Uni gimin potassium perman-garate-chi ba ding'begipa silchi raani pariko so'ode namgen. Indake dakode bisiko ong'katatna man'gen aro be'en gimiko napjani gimin mande agre sawawa aro sijawa.

Chipu bisi gnanggipa ong'ama ong'ja uko uina skode chipuko doke uni suani wagamko nibo, ua wagamrango a'kol dongode ua chipu bisi gnanggipa ong'chongmota.

**MATBURUNGRANG CHIKANI**

Achak, menggo, peru, matchapeng ba mapil-rangni wagamo aro jaskilo sogimin be'en dongani gimin uarango bisi donga aro ua'ango jo'ongrang bang'sranga. Uni gimin uarang mandeko chikode ba ku'akode ua chikani ba ku'akani pario pangnan m'ilarang napchongmotgen. Unikoa simsakjaode m'nsu dongode mande sagen ba sinaba donga. Indakgipa chikani pariko iodine ba potassium permanganate-ko chi baksa brine namedake su'srangna nanga. Parioni an'chi jokode namgen maina moila an'chi baksa ong'katbagen. Unikoa an'chi tipjana kingking potassium permanganate-ko chi baksa brine su'srangbo. Unon rongtaigipa ba'rakora'namedake wenwenbo. Ja'mano chikani parioni minsu ong'katode potassium permanganate-chi salanti su'srangtai-ra'e ba'rachi wenwentaitaibo.

**BU'SU BA GIPIN BU'ANI**

Ba'akoba basakoba matgipa go'ol ba ro'gipa bu'su ja'a ba jakko bu'gen. Unon uko okani gimin ja'mano a'kol agre chonani gimin an'chi jokna man'ja. An'chi jokjaode napgimin moila go'ol ba bu'su baksa jokgija ning'chin nonggen, unikoa ja'mano m'ingen aro sabegen. Uni gimin indakgipa bu'an. pari dongode an'ching an'chiko ong'katatna nanga. Sepon an'chi jokjaode pariko ma gipachurichi ratna nanga. Unon an'chi aro moila joke minjawa. Raani ja'mano iodineko nonge rongtaigipa ba'rachi uko wenwenbo.

**CHIO SRIHANI**

Sripgimin mandeko chioniko saldo'ni ja'mano rang-san dakchakna nanga; maina uni

ka'soprango bang'a chi dongani gimin balwa nana man'ja. Basakoba casakoba mande minute 15 ba minute 20 chiningo dongoba maiko dakna nanga an'ching uko uide indakgipa mandeko an'ching tangatpilna man'gen.

Mandechiosripodechi unika'soprango dongen aro an ching ia chiko ong'katatna nanga. Unigimin ua sibokgipa mandeko chikipe tuate uniko'ako bamgepe uni kisingkopko de'obo. Unon simsakbee on'tisa uko su'simpokbo. Indake dakode mitamchi unika'oponi ongkatgen. Basakoba basakoba sibokani gimin uni sre balwan ramako peng'ani gimin sreko on'tisa salongkatna nanga. Unikoa bakbak uni okni ka'mao ba'ak ba g pin bosturangko donbo. Jedakode uni ki'sangna bate uni skochipak onbatgen. Unikoa uni kosako bamgope ua mandeni kang'kare samgnio r'm e sa, gni, gitam ine ka'sne chammitingo, adita rake sinjetna nanga. Unon sa, gni ine ka'sne chammitingo watbo. Indake dakode sinje'mitingo chiko uni cheloniko ong'katatna man'gen aro watmitingo balwa unika'sopona napgen An'tangan rang'sitna man'jana kingking aganbagimin gita dakbo. Ua mandeni ja'a ba jak chikode chi ding'achi moliode namgen

### BIJA ARO GIPIN JO'ONG CHIKANI

Beri gnanggipa jo'ong chikode bicarbonate of sodako chichi ba katchichi nom'ate dapna mande namgen. Indiba soda dongjaode ka'singipa a'dubekko dapode nama.

Snare ba guang chikode apsangrik camphor aro chloral hydrate-ko brine nongode saako komiatgen Indiba dal'gipa snare chikode chipu suani gimin aganbagimin gita dakbo.

### CHAPTER III GIROT MINANI !

Gi'rot minna a'bachengmitingo bigil git-chakgen aro on'tisan nangkaioba sabegen. Ua sagipa biap ding'gen. Ua saa ka'sne ka'sne bilonggen. Unon ua ripomani jatchio mingen aro basakoba basakoba minsu an'tangan ong'katgen ba basakoba basakoba indakgipa saako minatgija namatna man'gen. Te'matchi biteko binekate gi'rotni kosako done ba'rachi wenwenbo. Indake dakachi uko namatna man'jaode magnesium sulphate ( julapko ) chichi nom'ate dape ba'rachi wenwenbo. Ia ba'rako pangnan sositbo. Kari aro chiko apsangrik brine ba'rako sositte kagopode nama.

Basakoba basakoba gi'rotni kosakgipa bigil ritchaani gimin minsu dongoba jokna man'jawa aro sabegen. Indake ong'ode uko raesa min-suko ong'kakatna man'gen. Gi'rotni jatchio rimitgen, uni gimin ua biapon ratna nanga. Ratmitingo an'chini ja'dil dal'gipa aro uiani ja'dilna simsakna nanga.

Basakoba basakoba adita bang'a chongipa gi'rotrang apsan biapo tom'gen Indake saode minsu bag'bea dongani gimin ua an'chio nape be'en gimikko saatgen. Ukoba magnesium sulphate ba julapko chichi nomate dape ba'rachi wenwenbo. Ua ba'rako pangnan sositbo. Kari aro chiko apsangrik brine ba'rako sositte ka'gopode nama.

Gi'rot minmitingo a'pal namdake re'na nanga maina re'jaode be'en an'sengjawa aro indake

ong'ani gimin gi'rotko namatna neng'begen. Uni gimin a'pal rejaode julapko ringode namgen. Bang'a chiko ringode namgen aro chiko te'matchi bitchi baksa ringode namgen. Be.en, do'chi aro na'kamko cha'nabe indiba uarangna agre gipin me'surangkode cha'na man'a.

### MIKRON SAANI

Ia a'songo bang'bea manderang aro bi'sarang mikron pari dongani gimin tale nikna man'ja. Maina indake ong'ronga ? itam manderang mikron saani ja'pangko uijae kritaia, mitamrang namgijagipa samrangko jakala, aro mitama namgipa sam dongoba maikai jakalna nanga uko uibreja. Mikron saani rokom rokom gnang aro mitam rokomkosamchinamatna man'jawa indiba namgipa samko jakalode bang'bata mikronsaako namatna man'gen.

#### (1) *Bakgitchak aro bi sarangni mikronko sanani :*

Bakgitchak ba bi'sa ong'mit'ngo uamang an'tangtangni mikronrangko sanna changjani gimin ma'a paarang uamangko sanna nanga. Anga ia a'songo donga ruutkujaoba bang'bea mikgringipa bi'sarangko nikmanaha Bang'bata bi'sarangan mikgitchak saoni gimin mikgri ong'aha. Uamangko namatani chol dongjasrangaha. Anga indakgipa bi'sarangko nike gisiko jajrengenga maina uamangni saako a'bachenemitingo anga samchi aro sananichi namatna amgenchim. Indiba mikron nosto ong'srangahaon namatna man'jaha aro bi'sarang tangenga dipet mikgri onngen.

Basakoba basakoba tampirang bi'sarangni mikrono dimo moilako donangani gimin mikgit-

chak saa ong'kata. Bi'sani mikkang rongtalode indakgipa mikkango tampirang ba'na sikjawachim. Nok aro noksamrang rongtalode tampirang dongjawachim. Uni gamin nokrangko rongtalatna nanga aro bi'sarangkoba aumiksuatna nanga.

Bagitchakni mikronrang bilgri ong'a uni gimin uamangko sal rakao donode uamangchakchikna man-jani gimin duk man'gen Indake ong'ani gimin bakgitchakni mikron saningbatgen aro basakoba basakoba ua dal'ahaon tale n kra man'jawa. Uni gimin bakgitchakrangko salakimo rakiode nambata. Sal rakao ba'na nangchongmotode uamangni mik'ronko ba'rachi pindapode namgen. An'chingni mikronrang bilakgipa ong'oba salko ruute nichakna man'ja aro ruute nichakode an'chingba mikgri gita ong'gen. Indide bakgitchakni mikron bilgri ong'e salko ruute niodeuni mikron namgija ong'batsranggen, maina uamang uigijagipa ong'ani gimin basakoba salko nitatdogen.

(2) *Dal'gimin manderangni mikronko sanani*

An'ching poriaimitingo mikrontangtangna simsakna nanga, maina simsakjaode an'chingni mikron bilgrigipa ong'gen aro andalgen. Namgipa chaki dongode walo poraioba namaia indiba salo salo poraiode nambata. Indiba ia a'songo namgipa chakirang dongjani gimin aro namgipa toni dam rakani gimin salo poraiode nambata. Isol nambatsranggipa chakiko chong'motan salkodakaha aro uko an'ching dam gri jakalna man'a. An'ching sal rakao poraina nangja ; maina leka gipokani gimin an'chingni mikronranggoagre tengbrapgen. Poraimitingo an'chingni mikron git-



chakode ba mikchi ong'katode poraiako dontongna nanga, jedakode mikron neng'takna man'gen. Mikron poraimitingo pangnan sarongode ba mikchi ong'ode doctorchi re'bana nanga maina ruute indake saode mikron namjabatroronaba donga. Walo pora na nangode aro chaki mikkango dongode an'chingni mikronrang neng'ninggen, maina chakini teng'sua mikrono teng'brapgen. Uni giminchakichipak janggilate poraiode nambatgen.

( 3 ) *Mikgitchak Saani :*

Mikgitchak mai ong'a ? Ian batroroningbatgipa mikron saani ong'a Rokomsa jo'ong mikgilni ka'mao donge jeli'oroani gimin ia saani ong'batronga.

Uko uianirang :

- (i) Mikchi ong'katgen aro rikelgen ba an'cheng donga gita dakgen aro sagen.
- (ii) Mikron gitchakgen.
- (iii) Salrakao dongmitingo sabatgen, aro salko nichakna man'jawa.
- (iv) Tusiani ja'mano mikki dapgen aro mikgil nangstigen.
- (v) Minsu ba mikki ong'katgen.

Mikron samgnian indake saronga maina sam-sao saahaode gipin mikronchiba batanggen. Adita ruute indake saode minsu pangnan mikron biteo nangan gimin uni pari dakgen. Basakoba basakoba indakgipa pari nonorini kosako donggen. Indakgipa pari namahaoba gipokgipa parini chin dongkugen. Ia parini chin nonorini kosako dongode mande nikbrejawa ba mikgri ong'srang-

gen. Indakgipa parini chin dongode an'ching ua mandeko mamungchiba nikatna man'jawa. Indiba mikgitchak a'bachengmitingo an'chinguko namatna man'gen aro pari dongjawachim.

Uko mai kai sanna nanga ?

1. Sal rakao dongna nangja indiba dongna nangchongmotode gisimgipa chosomako ganna nanggen.

2. Jringjring miksuna nanga.

3. Boric solutionchi mikronko su'srangbo je'dakode minsurang talningani gimin pari dakna man'jawa. Rongtalgipa kilchapko boric solutiono sim'bo. Unon nigitomitingo ua simgimin ba'rabakilkosepe boric solutionkomikronobang'e rudapbo. Indake dakode boric solution baksa minsu ba mikki mikrononi jokgen. Kanta gnignio indake dakbo. Mikron agre saode su'srangani g'sipo ba'rako ka'singipa chio sim'enba mikronni kosako donbo. Ia ba'rako sim'taitaiode namgen. Ka'tipna nangja, maina katipode minsumikrononi namedake jokna man'jawa.

Boric sam dongjaode chi seer sao kari chamos sako brine su'srangode nama.

Argyrol ba eyewater dongode nambatgen. Boric-chi su'srangani ja'mano go'olko argyrol ba eyewater-o sim'enba tingtotsako miksiko tingto-tatbo.

Tusina skang miksimango vaseline ba toko noagode mikgilrang ma'gapjawa.

A'bachenggipa salo uko indake dakode namatna altubatgen, indiba ruute saahaode uko namtna neng'begen. Mitam manderang, mikron saa indi-

nan namaia ine agangen. Basakoba basakoba indake namaba donga, indiba chanchie nibo, bang-bea mikgrigiparang ia saani gimin ong'enga. Uni gimin pi'ak mikgitchak sagiparang namgipa samko jakalode nambatgen.

Boric solutionko dakani : Chamos bri boric powderko chi ding'a adha seermang baksa bri'nbo Unon uko ka'sinatbo.

4 Miksimang be'pinape ba chapinape mikron biteko nangpekatani aro miksimang chataipilani gimin.

Basakoba basakoba mikgitchak saa namani jamano miksimangrang be'pinapgen aro mikron birongo nangpekgen. Ruute nangpekani gimin chonchongipa parirangko dake ka'sne ka'sne mikron andalrorogen. Miksimang miron birongo nangpekode mikron sagen aro basakoba basakoba mikchi ong'katgen.

Ruute indake nangpekode mikgri ong'sranggen. Samko jakaloba namgni ong'jawa maina mksimanrang nangp kaikugen aro parirangko namatoba gipin pari'angko daktaikugen. Miksimangrangko pike galoba namgniong'jawa maina ua nataigen aro mikron biteko matatgen. Uni gimin indake saore hospitalchi re'angbo unon doctor mikgilko churichi rae tarina mangen. Ramitingo agre sajava ma na rana skang goka ong'atani samko mikgilo bijichi dongen.

##### 5. *Miksim Sa*

Glaukoma saani indake ong'gen. Sko sabegen aro mikron bite bilonge sagen. Uno mikron git-chakgen indiba minsu dongjawa. Ka'sne ka'sne

mikron andalgen. Indakgipa saani kengni ong-bea maina indakgipa saode mikgri ong'ningbatgen. Ruute saode mikgri ong'chongmotgen la saani japang ian, chonemotan, mikronni ning'o agrechi bang'a. Uni gimin mikron birong on'tisa dal'gen. Dal'mitingo mikronni birong samtang-tango donggipa bigilrangko childogen, mikronni ja'dalko sinjetgen aro ja'mano nosto ong'atgen. Ua ja'dilrangko nosto ong'atani gimin mikron andalrorogen.

Ia saana namgipa sam donga uko jakalode aditana kingking ua saa namgen. Indiba saani komioba ja'mano ong'kattaigen aro indake dakode samko jakaloba ka'sne ka'sne mikron andalgen. Aro ia samko jakalmitingo simsakbera nangani gimin hospitalo dongode nambatgen.

Ia glaukoma saani samko jakaloba ong'kattaitaiani gimin a'bachengmitingo mikronko churchi raode nambatgen.

#### 6. *Ca'araci ong'ani*

Mande cataract saode m'kron gitchakja indiba ka'sne ka'sne mikron andalaja. Uko iachi uina mangel, chongmotan nonori gipokgen. Indake ong'ode mikronni ning'o ua gip'kgipa ro'ong gita donga. Samko jakaloba uko namatna man'jawa maina ua ro'ong rakbeani gimin j'ongatna man'jawa. Bilakbegipa samko jakalgenchimode ua ro'ong baksa mikron gimikan jronggenchim.

Uni gimin cataract saa dongode mikronko ratna nanga. Mikronko raode ua ro'ong gita dakgipa guliko bikotna man'gen aro ja'mano nikna mangel.

7. *Mikguri Dina :*

Indakgipa saani gipokgipa bigil gita dakgipa mikgipokni bigiloni ka'sne kasne mikgisimni kosako pindapgen. Indake basakoba basakoba nonoriko pindapgen. Nororiko pindapode mande mikgrigipa ong'gen.

Samrangchi uko namatna man'jawa uni gimin a'bachengmitingo, chongmotan nonoriona sokna skang churichi ua bigilko rae kike galna nanga.

8. *Miknapani :*

Basakoba basakoba balwa balani gimin maiba maiba mikrono napg'n. A'dimu, an'cheng ba gipin gipin chongipa moila mikrono napode saani gimin mikchi ong'katgen. Mikchi ong'katani gimin mikronko su'srange ua chongipa moilako balpakgen. Uni gimin maiba mikrono napani ja'mano tom'tome mikchipode an'tangan mikchi bang'a ong'katnaba donga. Mikronko repre-nabe maina repreode ua moila mikronni bigilko mate ning'tue aro uko galna man'jawa.

Indake basakoba basakoba a'dimu ba gipin jabol mikrono dongaia. Uni gimin mikgilko bik-pile nie jabolko nikna man'ode nom'gipa ba'rachi simsakbee ipake uko galbo. Mikgilko indake bik-pilatna man gen, chong'motan jakrani jaksi chongipachi go olko rim'emikgilni kosako donbo, unon jakasichi miksimangko de'dobo. De'domitingo sagipa mande nionna nanga. Ua jabolko galani ja mano boric acidchi su'srangode namgen. Indiba boric acid dongjaode on'tisa kariko chichi jrongate mikroko su srangode namgen. Indake dakoba jabol dongkuode mikronko namdedake

su'srangbo maikai jabol chi baksa ong'katna man'gen.

Indake joton ka'ahaoba jabolko galna man'jahaodedoctorchi sagipa mandeko rimbana nanga maina ruute donode mikron nosto ong'naba donga.

*Gitok Saani*—Ku'chi minokna man'gija gitok ning'o sabegen. Indake samitingo basakoba basakoba a'pal re'jawa, uni gimin julapko ringnanangaro bang'batachiko ingode namgen. Unon go'olko ra'e uni ku'choto kilchapko wenwene argyrol-o uko sim'e gitok ring'o nongbo. *Salprako* changgitam indake dakna nanga. Sin'kario saode mes kimilni ba'rachi gitoko w'nwenode namgen, maina gitok ka'sinode ua saani namningjawa. Fever saode miko ch'nabe.

*Soldi Nangani*—Soldi nanga a'bachenmiting mande gisep gisep atchinggen. Unon gingringoni chi gita ong'katgen aro gingting datketgen. On'tisa fever aro sko saa donggen. A'pal namedake re'jawa. Unikoa gusugen aro gitok delgen. Basakoba basakoba kosakgipa ku'ch'lo pari dakgen maina chi gita dakgipa ging ingoni pangnan uno donggen. Ian batninggipa saani ong'ani gimin samitingo gipin mende baksa rojode nambatgen. Ia saani jo'ongrang pilak an'senggipa manderangni gingtingo dongenga indiba mande bilakode ba an'sengode ua jo'ong mandeko saatna man'jawa. Indiba mande bilgide ba ka'sinako man'ode soldi nangningbatgen.

Pilakna skang julapko ringchengode namgen maina bibikrangko rongtalat ed be'en gimik an'sengbatgen aro ua saako namatna man'nggen. Unikoa gingkolo balm-konongode namgen maikai

rang'sitmitingo ua balwani biba ning'o napna mangel. Chelo aro gitoko mes kimilni ba gipin napnaba donga. Atamo aro pringo adhachamos balmko chi gitumitingo jrongatbo a o uni bibako gingsikbo. Indake dakode ua samni b ba ningo nape namatna man'gen.

*Putguti Saani*— Putguti saani a'sel dingtangmancha ka'sop ning'o jo'ongrang dongani gimin ong'a Sagipani stuanio jo'ongrangko microscope chi nikna man'gen. Putguti saode rangsitna nenggen aro rang'sitodechel sagen, gusubegen aro stu gitchak ba gisim ong'gen

A'bachengmitingo basakoba basakoba so di nanga gita nikgen unon rang'san be'en sin b e tiltilgen aro ba'ra bang'beako pinoba ding'atna man'jawa. Unon be'en ding'gen aro antisana kingking komijawa.

Sachengani gnigipa ba gitamgipa salo gusumitingo gitchakgipa stu ong'katnaba donga arosagipa mande gongrake rang'sitna nanggen. Maina putguti samitingo ka'sop ning'o chi gita ba g ngro gita dakgipa an'chi donga Basakoba basakoba ka'sop samsao an'chi aro chi brine tin'kagen Indakesaode uandakgipaka'sorchi rang'sitna man-jani gimin gipin ka'sop rake kamko ka'na nanga. Ka'sop indake kam ka'osa balwa be'en gimikna chu'onggen. Putguti sam'tingo ka'sopni bak t n'kachongmota ine uina man'gen maina putguti sae sigipa manderangko doctorrang rae tin'kagimin an'chirangko nikaha. Anga an'tangba indakgipa manderangni manggisiko rae ka'so, ko ningtangmancha samko bikotkuja indiba basakoba

bsakoba namgipa samchi aro sananichi sagipa mandeko an'sengatna man'gen.

M and simsakode putg ti sawa indiba mande soldi manmitingo simsakjaode ja'mano ka'sopona sokange putguti saa ong'kata. Mande sal gimiko bang'a kamrangko ka'ewalgimikoba'ragritusiode chel ka'sinani g min putguti sanaba donga. Mandeni be'en bilgri ong'ode ua gipin saaniko manoba putguti sajolgen. Budepa ba buchuma putguti saode siningbatgen. Uni g'min be en nengmitingo ba'ra gri tusina nangja aro sin'karimi ingo simsakbatna nanga maina s'n karimitingo bang'bata putguti saa ong'katronga.

*Putguti sa ko sanani gimin*—Sana a'bacheng ntal chaka na nan'ja maina cha'atode chel ka'singen arosamitingo kan'chokkamka'beani gimin chaka to e agre kam ka'na nan ani gimin uko namjaate sinaba donga. Chel ka'sinako champengna ba'rako pinna nanga.

Fever dongmitingo miko cha'na nangja indiba nom'begipa sagu, biteni bitchi me'chi dut aro bang'bea chiko ringode namgen. Chiko ringna sikjaode adha chamos kariko on'ode ja'mano chiko ring a sikgen. Bang'a chiko ringode sagipa ding'olningani gimin tever komigen. Ding'olmitingoba ba'rako pinna nanga.

Putguti samitingo a'pal re'jaode namjasrang maina ka'sopo bisi donggen aro bibikrangoba dongode mande sin'ningbatgen. Uni gimin sana a'bachengmitingo julapchi bibikrangko su'srangna nanga unon ja'mano bang a chiko ringode ok namgen.

Chel saode liniment-ko nongode namgen,



unikoa chelo ba'rachi ketket wenwenode nambatgen maina chel tom'tome dorgode sab ejawa.

Adha chamos balmko gituenggipa chichi jrongate uni bibako gings kode namgen maina indake dakode ka'sop ning'ona sokangna man'gen. Grain bonga ong'gipa (guli rong'a quininekoba salprako changgitam on'ode nama.

*Ka'tong Saeni*— Mande an'sengode uni ka'soprang chel ningo il'enggen. Indiba chel saode ka'sop chelni pakmao ma'gapa. Indake sagipa mandeni rang'sitmitingo ka'soprang namedake il'engna man'jani gimin sabegen. Indake saode ka'sop aro chelni pakmani gis po pari donga. Uni gimin rang'sitmitingo ka'sopni pari natgrikani gimin chel sabegen. Ia saaniara chelni ka'magipa bako saronggen. Basakoba basakoba indake sagipa mande gusuode namen sagen. On'usa feverba donggen Chel il'engode sabatani gimin sagipa mande chelko il'engatgija rang'sitna joton ka'gen.

Mande n'eng'ode, chel ka'sinode, sosiode aro tusimitingo nokni balwa manjaode ia saan ko manningbatgen. Indake saode chel'o t. m'tomatna aro ding'atna nanga. Uko namatna namgipa ringani sam dongja indiba te'ma'chi biteni bitchiko chi d'ng'a baksa ringode namgen. Chelko ba'rachi ketkete wenwenbo indake uko ton'tomatna man'e ta pari tom'tomani gimin namningbatgen. Chelko liniment-chi nongode n mgen. Aro ro'ongko ding'ate uko ba'rachi wenwene chelko ding'atskana man'gen. Sagipa mande tuode nambatgen maina chelko pindapna nanga aro tom'tomatna nanga.

Sal dok ba sal snio ua saani namkaljaode sag pa maudeko hospitalchi rimbana nanga maina indake ruute saode chel ning'o minsu donggen unon mande sinaba donga.

**Tuberculosis ba Ka'sop Saani :** Tuberculosis saode ka'sop ning'o parirang donga. Dingtangmancha jo ongrang cha'ani gimin ia parirang donga. Ia jo ongrangko siatna neng'beani ong'a, aro sagipa mandeni stuo ua jo ongrang dongani gimin ua saani batninggipa saani ong'a Indake ia saani batgen chongmotan sagipa mande stuode ua stuo a'dimu donggen. Ja'mano balwa ua a di nuko balpakon gip'n manderang uko rang'sitchape, jo ongrang uni ka'sopona napange uno pari dakgen.

Parirang ka'sopo dongani gimin basakoba basakoba an'chi stu baksa ong'katgen. Sagipa mande pangnan adita gusugen aro ka'sne ka'sne bilgri ong'angrorog-n aro ja'mano sigen.

A'ch'k a songo indakgipa saani da ororo bang'ja indiba gipin a'songrango bang'bea. Indake saode sagipa mande maioba siuchakna nanga, aro ua stuako salantion so'e galna nanga maina stuo bang'a jo ongrang dongani gimin so'e galjaode ua saa gipin manderango batninggen.

Cod liver oil na tokni bikani to, chamos gniko salprako ringode namgen. Do'chi, dut aro akgital bijakko cha ode namgen. Adita quininekoba ringode namba'gen

Indake saode bang'e kam ka'na nangja maina be en neng'ode saningbatgen. Cigarete aro molako ringna nangja.

Tusimitingo namgipa balwako man'na nang-

ani gimin kelkirang aro do'garangko oe tusina nanga.

**Ok Saani :** Basakoba basakoba mande min-bregija song'gimin cha'aniko cha'e, ba agrepile cha'aniko cha'e ba gitang biteko ba maiba nam-gija cha aniko cha'aode atom sabegen. Be'en neng'mitingo cha'aniko cha'ode atom sagen. Aro maiba maiba namgija cha'aniko cha'ode atom sagen aro okditgen. Maina atom cha'aniko jrong-atna man'jaode sagen aro mande dukko man'begen. Uni gimin pilakna skang ia cha'aniko atomoniko galna nanga.

Cha'aniko okningoniko indake galna man'gen kari chamos sako chi ding'boma piala sao brine jrongatbo. Un'n uko ringani ja'mano mande wakgalgen. Wakgalode saa rang san komi-gen ma'na jronggijagipa cha'aniko atomoniko galaha. Unikoa dongode chamos sa sodako chi baksa ringode namgen, maina ua bibikrangko su'sranggen. Unon sabana kingking mamung-kobachana nangja maikai atom n ng'take saun ko namatna man'gen. Unikoa miko nom'e song'e chabo, indiba ma'chu be'en, na'kam aro jal kko anti sana kingking cha'na nangja.

**A'pal Rakani :** Salantio a'pal namedake re'ode namgen indiba namedake re'jaode ba a'pal rakode namja maina be'en gimik an'seng-jawa. Blng'a A'chik manderang indake sim-sakjao an'seng'ijaniko man'e'ga. Basakoba basakoba mande sal gitam ba sal brina kingking a'pal bibikrango ruute dongode uni bisi be'en gimiko nape be'en an'sengjawa aro sko adita sagen ba miksulgen. Uni gimin sal sa'ba sal gni a'pal re-

jaode dal'gipa chamoso chamosgni julapko ringode namgen.

Mande pangnan namedake a'pal re'jaode uni cha'ani bewalko dingtangatna narggen maina julap ba gipin samko pangnan ringode be'en bilgrigen. Indakg pa mande bang'bata chiko ringode namgen maina chi chu'ongode a'pal rakjawa. Bolni bite me'raku do'chiko agre bang'e cha'na nangja Salprako apsan kantao a'p l re'atna man'ode nambig n maina bib'krangni bewalko indake ong'atna nanga.

**Ok Re'ani :** Ok re'aniko bak gitam dake iano seaha : 1. Bakgitchakrangni ok re'ani, 2. Dal'gimin manderangni ok re'ani, 3. Okgitchak Saani.

**1. Bakgitchakrangni ok-re'ani :** Pilakna skang bi'sani okko ding'gipa ba'rachi wenwenbo, maina ok ka'sincde saako namatna neng'batgen. Basakoba basakoba bakgitchak tusim.t ngo ba'rako kike galgen unon ok ka'sinako man'e ok re'ani saa ong'katgen. Uni gimin bi'sani okko pindapna simsakna. nanga.

Ok re'mitingo bi'sa sal sana kingking bang'gija sokko ringna nanga. Indiba uni pal chiko on'bo. Castor oilko chongipa chamoso chamosa kanbo. Bi'sa ok agre saode uni ja'arangko tem'dogen aro chrikgen. Indake dakode bi'sana castor oilko kanna skang paregoric-ko tingtot bunga no'bo.

Sal'ani ja'mano ka'sne ka'sne bang'bata sokko kanode narogen.

**2. Dal'gimin mandeni okre'ani :** Basakoba basakoba mande namgija cha'aniko cha'

naba donga, ba tusimitingo ba'ra gri tusiani gimin uni ok agre ka'singen. Unikoa ok sagen, aro gam'gen, okditgen, ok re'gen.

Indake saode mande sal sana kingking mamungkoba cha'ajaode namgen. Dal'gipa chamo gni ba chongipa chamoso chamos bri julapko chi ding'boma baksa jrongate ringna nanga. Ama dipet tom'tome tuna nanga aro okko ding'atna nanga. Indake dakode bang'bate okre'ani saako ramtna man'gen. Ok re'ako tipatoba bisi okningo dongkugen.

**3. Ok gitchak Saani :** Okgitchak saani rokom gni donga, rokom sa ramram okgitchak saani aro rokom gipin namatna neng'gipa okgitchak saanirang donga. Ia ja'mangipa saanina dingtangmancha samko jakalna nanga.

Basakoba basakoba okgitchak saani ka'sne ka'sne a bachenggen indiba bang'bata salon rang'san a'bachenggen. Okgitchak sana a'bachengode mande sin gen, ja'mano dingolgen, unikoa ok sabegen a o ok re'begen. Ki'o ok sabatgen. Basakoba basakoba minute chikung ba minute chibongaprako a'pal re'gen indake saode bibikrango parirang donga, a o parirangoni an'chi joka.

Indake saode mande chakatgija tom'tome tuna nanga maina il'engode bib ikrangba mohatgen. Uni okkoba ding'atna nanga. Sal gni ba sal gitamna kingking cha ani gri dongode namgen maikai parirang namningna man'gen. Tipa'ani samko ringna nangja maina okre'ako tipatode bisi okningoni taljawa. Indiba chamos gni julapko chio jrongate kanta briprako sal sa bg sal gni ringna nanga, maikai bisiko talatna aro bibikrangko

su'srangna man'gen. Dysentery mixture-ko man'ode nambatgen maina uno (1) julap, a'pal re'atna, (2) acid, jo'ongrangko siatna, (3) Peppermint water, saako komiatna gita donga. Dysentery mixtureko kanani : kanta briprako dal'gipa chamoso chamos gniko ringna nanga.

Ok agre soade julap baksa tingtot chikung paregoric ba chlorodyneko brine ringbo. Indiba chlorodynekosan ringna nangja.

Sal gnini ja'mano dut ba me'ch ko ringna man'gen aro ja'mano chongmotan an'chi dongjaode, sagukoba cha'na man'gen. Unikoa brigipa ba bongagipa salo nom'bee song'gimin miko cha'na nanga. Samitingo rakgipa mi, bijak ba me'rakuko chana nangja maina uarang parirangko-nangtingate uko namningatjawa.

An'ching ua saako champengna man'gen maina ua saara cha'a ringanichi batroroa. Wachikari a'bachingmitingo ua sa bang'batg.n maina arankario moila, chongmotan jabol, mandeni aro matbrunrangni ki i a'ani kosako donga. Indiba mikka waode ua jabolrangko chiringona balpakgenaro mandeukoringchapman'c okgitchaksagen, Unigimin wachikari a'bachengmitingo ja gni ba ja gitamna ringani chiko ritode namgen maina uko ritode p'lak saatgipa jo'ongrangko ( mongsongde okgitchakni aro mgrikini jo'ongrangko ) siatgen. Ia saaniara batrorogipa ong'ani gimin sagipani noko donggiparang simsakra nanga. Sagipani ki'io bang'bea okgitchakni jo'ongrang dongani gimin ua ki'iko waalchi so'ode namgen; maina noksamo ba sepanggipa burungo uarangko galode uarango tampirang dime mandeni cha-

an'rango ma'bakgen. aro okgitchak saani jo ong rangko ci a'anio donggen. Indiba bang'ba'a manderang simsakgija burunrango a'pal re'gen aro mikka wami'ingo ki'irangko balpakbaon gipin manderang uigija uko ringe sagen. Uni gimin, wachikari a'bachengmitingo chiko ritgija ringnabe. Mi cha'na skang sabon baksa ritwimin chichi jaksuna nanga maikai jakrango okgitchak saani jo'ongrang dongode ua'angko gala'na man'gen.

4. Mariki Saani : Garo H Ilso don'giparango da'ororo bang'a mariki sagiparang dongenga aro bang'a manderang mariki saiko man'e siangaha. A'chik manderang ua saani a's. lko ma'siahaode aro uko champengna changahaode, indita bang'a manderang siangna nangjawachim.

Mariki saani a'sel chonchonbegipa, mikronchi nikna man'gijagipa jo'ongra'gni gimin ong'a Microscopechi uarangko tale nikna man'a, maina anga antangan indake nikaha.

Mariki saatani jo'ongrang bibikrango napchenga, unon ua namen jelanga aro bisiko on'kat ata aro ua bisiko galatna gita okre'begen Indiba ia jo'ongrang bibikrango napna skan an ku'siko napchengna nanga. Cha'ani ba ringani baksa minokchapako man'e ua bibikrangan sokon n siatna nengbeaha, aro sagipa nambegipa samrangko ringoba sirongo. Uni gimin be'enona napangna skangan uarangko nisiatode nambata. Ua'angko cha'anirangooniko nisiatna name'ake ritna nanga. maina ding'beode uarangko dikdiksanon nisiatna mana.

Indiba cha'ani aro ringanikoson simsake rita

ba song'na nanga indake ong'aia, maina saatani jo'ongrang jaksirango nange ritgimin chio, ba song'gimin cha'anio nangtaina man'ode ritani namgni mai ? Pangnan mi cha'na skang ritgimin chio jaksuna nanga aro jakskilrangko namen rongtale rakina nanga.

Mariki saatani jo'ongrang maikai sagipani be'enoni sakgip nni be'enona batskara ? Jo'ongrang be'enoni a'pal re'ani baksa ong'kata aro mariki sagipani a'pal re'anio bang'bea hajalni hazal jo'on rang donga. Da'o sagipa an'tangan ba uko nirokkiparang simsakgijagipa ong'ode, ia chenchonsranggipa jo'ongrang ba'rarango aro jakrango nanga aro indake gipinran uko man'paa.

Mitam songrango manderang nokrangko chiringni sepango rikronga, aro nokrango mariki sagipa dongoba, a'pal re'anirangko chiringni rikamo galata. Unon mikka wadapon marikin jo'ong angko chiona balpakanga aro chi baksa brine uarang gipin songrangona soka. Unikoa manderang ritgija ua chiko ringe mariki saaka man'paa. Uan bebe ong'a ine uina man'a, maina chiringnirikamo dongkiparangmarikisaako man'batkiparang ong'a. Pilak manderangsagiparangni a'pal re'aniko so'e galode indake ong'jawachim.

Da'ororo manderang mariki saako champeng-na gita injection-rangko man'enga aro ua nam-bea, ma'na injectionko man'e ja brina kingking ua saako man'jawa ine uisona man'gen. Saatani jo'ong ang be'eno napoba ia bijichi napatgimin sam be'eno dongmitingo jo'ongrangko nisiata. Indiba basakoba basakoba manderang injectionko



man'na skang mariki saa songo napa aro bang'a manderang sia. Uni gimin mariki saa songo dongode, manderang ia ka'mao janapgiminrangko dakode nambegen aro champengani ong'chongmotgen.

Chi aro matchu sokko name nitbo. Song'gja ba gittang cha'aniko cha'nabe. Sagiparangni jakalgimin ba'rangko aro a'pal re'anirangko so'e galbo.

Mi cha.na skang ritgimin chio jaksuto. Sagi-pako nitrogipa gip'n manderang baksa anti sana kingking re'na nangja.

Songo saksa mariki saako man'chengon injectionko su'gipa doctorko rang'san, nisenggija u'atbo aro injection on china janapbo.

### **SIN'E DING'E SAANI (MALARIA FEVER)**

Sin'e ding'e saani a'sel, an'chio dingtangmancha jo'ong napani gimin ong'a. Sin'e ding'e sagipani an'chio jo'ongrangko nikronga. Mikron mangmangchi uarangko nikjawa indiba microscopechi nikna man'a. Ia jo'ongko chongipa jakstem gita nika, aro gitchakgi paan'chini cellrangni ning'o nikronga.

### **Ia Jo'ong An'senggipa Mandeni An'chio Maikai Napa ?**

Ia jo'ong cha'a ringa aro bigil gita an'tangan napna man'ja. Ia jo'ong a'palo dongna man'jani gimin an'chingni cha'ani ringanirango aro bigilrango dongna man'ja. Indiba ia jo'ong rokomsa gangguni okningo tangna man'a. Ia jo'ong gangguni okningo tangna man'oba skangni

**dongkamg pade ong'ja.** Indiba ua ganggu sin'e ding'esagipani an'chiko salopon, an'chirang baksa jo'ongrangko salopchapa, aro ua jo'ongranggangguni oko dongmitingo jelerroa. Unon gagguni oko aro ku'sikoba ua jo'ongrang donga. Chinga iako uichongmota, m'ina doctorrang microspechi uko nikaha.

Unon indakgipa jo'ong gnanggipa ganggu an'senggipa mandeko chikon gageuni ku'sikon jo'ongrang ku'chi baksa brine an'chio naskaa. Unon ua an'senggipa mandeni an'chi bilakengode ua saako warachakna man naba donga, indiba bang'bee chikode ua mande saako man'gen. Ia jo'ong an'chio napmano ka'sne ka'sne jelerroa aro indake anti gni ba antigitamni ja'mano jo'ongrang bang'ahode mande sing'e saa ong'katgen.

Indiba mande an'sengbrejaode, soldi nangode, ba mikka wadapako man'e sin'ode ruutgijan sagen Maina unomiting anchingni ning'o donggipa warachakgiparang bilgribea.

### **Sine Ding'e Saako Uiani Cholrang :**

(1). Bilonggipani : (a) Sin begen (b) Ding begen (c) Ja'ong taningona napani gimin sko ding. begen aro bi'sa ong'ode basakoba basakoba chrike dikdeke ku'sik moe sibokgen, ba matri saa gita daka, aro basakoba sis'anggan. Dal'gimin mnde ong'ode sko sapretgen aro betbetnaba donga. (d) Bi'sa ong'ode, wakala ok re'a daknaba donga aro gisingipa an'chi a'pal re'anio dongnaba donga (e) Unon sagipa namkalode ding'olbee be'en ka'singen. Ia saani kengnigipa ong'a aro uko nam'na neng'be. Namkalahaoba sarongtaigen.

(2) Bilonggijani : (a) Sin'chenggen aro be'en an'sengjawa. (b) Ding'gen aro sko s'agen (c) Ka reknaba donga (d) Ding'olgen aro be'en ka'-sintaia.

Ia saako mn'ode sirongja, indiba jringjring saode an'chi komibee bi gribegen aro gipin saako ran'ninggen. Ia saanina sijaoba gipin saanina sinaba donga. Ia sin'e ding'e saani jo'ongrang an'chiko gimaatranga.

**Sin'e Ding'e Saa Batrorogniko Champengani Cholrang :**

Ia saa champengna man'giparangoni mingsa ong'a, an'ching joton ka'ode uko champengna man'gen. Gangguranko gimaatsrangna man'ode ia saako gimaatsrangna mag'enchim, maina. ganggu'angna agre gipin batroroani chol dongja. America a songni salgro jolo ia sin'e ding'e saani skango adita bang'achim, indiba chibolrangko dape ba ran'ate, torangko rudape gangguranko gimaataha aro da'ororo ua jolo ia saa dongjaha. Maina chibolrango aro jokgijagipa chirangosa ganggurang bitchi chironga aro indakg pa biaprangosa uamang dongna namnika

Indiba ia a'songo wachikari dongani gimin chibolrang pangnan ran'ja, unbaksaba chibol aro jokg jagipa chirang bang'srangani gimin torangko jakalna koros chu'ongjawa. Uni gimin ia a'songo ganggu'ko gimaatna man'jawa.

Indiba an'ching joton ka'ode is ganggurangni jelrotoako champengna man'gen.

(1) Nok rikna nokapko nichengode chibolrangni sambao ba andalgipa biaprago ba balwa

nangbregijagiparango tik ka'na nang'ja Maina ua biaprango ganggurang bang'gen aro sin'e ding'e saa bang batgen.

(2) Indakgipa biaprango rikmanahaode chibolrangko dapode namgen.

(3) Ran'china gita chikareko kitode aro burungrangko rongtalatode namgen. Maina chi jokgijagipa biaprang dongjaode gangurang bitchi chi'na man'jawa.

(4) Indiba chiring sambao dongna kengni bang'breja, maina ganggurang bitchi chi'oba bitchiko balpakanggen. Indiba chirango bolrang chaode hij okako champenge sambarango chiko tom'toma'gen aro ganggurang uarango bitchi chi'e jelrorogen. Indakgipa chiringrang nokni sambao dongode chi joksolna man'na gita bolrangko o'e galna nanga.

(5) Nokni sambao wa'a dongode, uko denani biritchong dongode, uanon wa'singtok dongnaba donga. Dongode aro uarango chi gapode ua biaprango ganggurang bitchirangko chi'e jelroroatgen. Indakgipa biaprangko namedake ni rokna nanga.

(6) Wachikario chikare kitani badiaba biapo nokni sepango chiklok dongnaba donga. Indakgipa biparangkoba nirokna nanga.

(7) Nokrangko rongtale rakina nanga, maina nok rongtaljaode ganggurang bang'bogen.

(8) Brena man'ode mosorirangko jakalna man'ode nambata, maina ganggurang walo chirongbata.

Kosako janapgimin cholrang gita an'ching

ganggurangni jelroroako champenge ia saako champengna man'a. Indibaganggua rangkogimaatsrangna man'jaode saako champengani gipin cho'rang gngang

Pilak mandeni an chio sine ding'e saani jo'ong dongjaode, ganggurang dongoba aro saksa sakgipinko chikoba sin'e ding'e saa dong jawa, mai'a ganggurang sagipaonikosa jo'ongrangko ra e gipino jelatna man'a Uni gimin an'ching pilak manderangni an'chioniko ia sin'e ding'e saani jo ongrangko gimaatsrangna man ode' ganggurang dongoba saa dongjawa  
**Ia Jo'ongrangko Maikai Gimaatna Man'gen ?**

1. Be'enko an senge aro bilake rakiode uan namgipa cholong a, maina be'en an'sengode jo'ng napoba saningja. An'chingni namgipa an'chi ia jo'ongrangko gimaata. Uni gimin an'ching cha'a ringani gimin simsakna nanga.

2. Mande an'senggipa ong'oba bang'bea jo'ongrang napode saako man'gen. Man'ahaon, ia jo' ngrangko maikai gimaatna mna'gen ? Iako gimaatna quininean nambatgipa sam ong'a ine an'ching uia.

Quinine boloniko man'chenga ? England ba America a'songoniko man'ja indiba Indiani sepa-nggipa chichangrangoniko iako man'chengaba. Changsao Missionary saksa is chichangoni manderangni rokomsa bolbigilko sam gita jakalako nikaha. Ia samko jakale sn'e ding'e saako namatranga ine nikaha. Unikoa ua songtangchi re angpilon adita ua bolni bigilrangko an'tang baksa songrangchi ra'angaha, aro uko jakalani

gimin aganaha. Unikoa ka'sne ka'sne pilak manderang uibarorobaha aro bang'bea namgniko man'aha.

Ia quinine sam nambegipa ong'oba, chu'onga gita ringjaode namgni dongbreja aro agre bang'e ringode pekgen. Uni gimin doctortangni ge'eta gita chu'onge ringode nama. ( Dal'giminrangna gren ( grain ) dok salo chang gitam. ).

Ua quinine samko ringna a'bachengon on'tisa julapkoba ringchapode namgen, maina okko rongtale rakiode be'en bilakbate saako warachakna ambata.

Sin'e ding'e samitingo manderang sin'bemitingo chu onga gita ba'rako pinodenamgen arochi ding'ako bang'e ringode bakbak ding'e saako gimaata. Ding'na a'bachengmitingo ba'rarangko kinggalgija pingripkuode nambata, maina bang'e chi ringani' gimin aro ba'rako pingripkuani gimin ding'olning'gen aro indake be'enni ding'ako komiatgen.

Sin'e ding'e saa namkalahaoba quinine samko adita salna kingking jakalode namgen. Maina indakesa jo'ongrangko gimaatsrangna man'a.

## BERI BERI

An'chingni cha'anirango rokomsa baitamin (vitamine) minggipa donga. Iako rokom bri mang dake suala, chongmctan baitamin A, B, C, aro D. Iarangoni an'chingni cha'anirango baitamin B dongjaode ba chu'ongjaode beri beri saronga. Ia baitamin B, mi bigik pangchakgipa merongo donga aro olasirango, namgipa duto, do'chirango aro gital me'su samjako donga. Ronggimik bud daloba donga.

**1. Ia Saako Maikai Uina Man'gen ?**

(i) A'bachengmitingo soldi nanga gita ong' naba donga. (ii) Ja'a jakrang b'lgri ong'a. (iii) Ja'a jakrang bonaba donga. (iv) Ja'a jakrang chimita aro ja'mano goka ong'a.

**2. Beri Beri Saako Maikai Namatna Man'gen ?**

(1) Cha'anirangni gimin simakna nanga Chongmotan mimangmangko cha'aigija rokom bijak me'surangko cha'na nanga. Mikoba agre boke su'srangna nangja aro kolo su'ako cha'na nangja, maina baitamin mi bigilchipaksa dongani gimin agre su'ode ba kolchi su'ode rang'san talanga.

(ii) Je cha'anirango baitamin B donga uarango bang'bate cha'na nanga, chongmotan olasirang, buddal, do'chirang aro gital me'gu samjakrangko cha'na nanga.

(iii) Ronggimik bigil gnang bud dailko atamo chio dim'e donenba pringo chiko gale adita sal rakao rame bimik bretahao gitingcha'ode namgen, maina ia bimikrango baitamin B bang-bea.

(iv) Marmait minggipa sam, pringo mi chaanti chongipa chamoso chamosprakko cha'chapode dakchakani ong gen, maina ia samko me'su samjakran oniko tariabani gimin uno baitamin B bang-bea.

**HALDIA SOP SAANI**

Haldia + Sop Saa rokom gni donga, be'en rimite saa (dal'gimin be'en rimite sa), aro bak-

gitchak haldia sop saode uni mikronrang, jakskil-rangaro be'en g mik rimitgen aro be'en an'seng-jawa. A'pal-re'ani gipoka aro su'bu rimita.

**1. Haldia Sop Saani a'sel rokem gitammang donga :**

(i) Bikit bitchini ramako peng'a (ii) Bikani cell'ang nosto ong'ani gimin (iii) Be'eno gipin saa dongani gimin.

(i) Bikit bitchiko bikao daka aro ua bitchi bikitona re'angskae bibikona jokanga. Ia bikit bi'chi bibikrangona jokange cha'anirang baksa brine cha'anirangko jrongatna dakchaka aro a'pal re'aniko rimitata. maina cha'ani atomo dongmit'ngo aro bikitni bitchi baksa nangrimna skang bokachim.

Ia bikit bitchini ramako maibakai cham-pengode bikit bitchi bikaoni jokangna man'jae an'chio napskaa.

(ii) Be'eno agre bisi dongode bikani cell-rangko nostoi ong'atgen. Unon bikit bitchiko an'chion'ko salopna chu'onga gita bil dongjani gimin bikit bitchini mitam bakrang an'chio bang'e dongkugen. Uni gimin be'en rimitgen.

(iii) Ben'eno gipin saarang dongode an'chini gitchakgipa cellrangko gimaate rokomsa rongko daka, jeoniko bikit bitchiko daka. Unon ua rong an'chio agre bang'e dongani gimin bikani cell-rang kam ka'oba ka'srapjae an'chion bang'bate dongrika. Uni gimin be'en rimita.

**2. Haldia Sop Saani Japang :**

(i) Bang'bata salon mande agre cha'ani gi-



min, ba je bostuko jrongatna man'ja ba neng'a uarangko cha'ani gimin, ba agre chu ringani gimin an'chingni bibikrang sagen. Bibikrang saani gimin bikit bitchini ramakoba saatgen maina ua rama bibi ao nap<sup>1</sup>. Bikit bitchini rama skongani gimin chu'onga gita bikit jokna man'jae an'chio nappila.

(ii) Bikito jo'ong nape pari dakode, parini sambao donggipa bikit bitchi tin'kagen aro jam'ano ro'ong gita rakgen. Basakoba uarang bikit bitchini rama gita jokbae ramako champengani gimin bikit bitchi jokna man'jae an'chio nappilaigen.

(iii) **Haldia Sop Saako Uiani Cholrang :**

(1) Ok saa, ka'reka aro cha'na sikja. (2) Mikron rimita. (3) Be'en rimita. (4) Be'en neng'a. (5) Su'bu rimita. (6) A'pal-re'ani ramram -na bate bokbatgen. (7) Be'en ka'kitnaba donga. (8) Jakmitchi re'arang komigen. 9) Bika sanaba donga.

## CHAPTER IV

### WAGAMRANG

1. **Bi'sarangni wagam :** Basakoba basakoba bi'sarangni skanggipa wagamrang go'okningjani gimin gnigipa wagamrang skanggipani janggilchipak nabagen bachamitapgen. Unon ja'mano uarang gonggegen. Indake dakode uarang nitojawa aro namedake cha'na man'jawa. Uni gimin skanggipa wagam go'okningjaode uko oke galna nanga.

2. **Wajong cha'ani :** A'chik songo bang'a manderangni wagamrang namjasrang, wagamrang soani gimin namjaenga., Wagamrang rongtalode uarang sojawachim ine an'ching uina man'a. Maina moila dongjaode jo'ongrang napna man'ningjawa. Uni gimin moko cha'ari ja'mano chichi ku'sripe wagamrangko jaksichi nate rongtalode nambatgen.

Wajong cha'a wagam ningo donggipa ja'dilona sokode wagam sabegen. Iani gimin mande basakoba basakoba dukko man'begen maina tusina aro mi cha'na man'jawa. Indake wagam saode uko oke galode namgen. Maina oke galjaode ka'sne ka'sne sabatgen aro be'ninggen. Ua saani b'si an'chio nape mandeko an'sengatjawa. Basakoba basakoba ua sogimin wagamni bisi an'chio napani gimin beholi saa ong'katgen aro grengni biritchurang aro ja'dilrang sagen:

3. **Wajaring minani :** Basakoba basakoba wagam sabegen aro wagam ja'pangni wajaring gitcchake ripomgen. Indake saode wajaring min-

inga ine uina man'gen. Ro'ongko dingate uko ba'rachi remreme ripomani kosako donode saako adita komiatna man'gen. Indiba wagamko oke galode nambatgen maina indakgipa mina ning'tua aro wagamko okjaode minsujokna man'jani gimin mande duk ong'begen. Ua minsu an'chio nape be'en gimikko an'sengataja. Skango anga indake sagipako nikaha. Ua mande waaamko okna sikjaha. Minsu jokna man'jani gimin minsu grengni ning'o nape uni chengknaniadhasororoe bon'aha.

An'chingni wagamrangko pangnan rongtala-tode nambegen maina inkake dakode uarang soningjawa aro ruute namkugen.

4. **Ku'sik Soani** : Bakgitchakni ku'sikna simsakna nanga maina pari ku'sik ning'o dongode bi'sa cha'na man'jawa aro basakoba basakoba ua pari batroroe gitokona sokgen. Gitokona soka. faode bakgitchak sokko minokna man'jawa aro-namedake rang'sitna man'jae sinaba donga. Anga indake sagipa bi'sani siako nikaha, aro uko namatna man'jaha maina ua mamungkoba cha'jaha ; pari gitoko bang'beaha aro rimbana skang ua bi'sa ruuto saahani gimin bilgri ong'beaha. Indiba a'bachengmitingo ku'sik ning'o pari donggipako namatna altua. Skanggipa ma'gipani sokko rongtal- rakina nanga maina uano moila ba pari dongode bi'sani kusikba sanaba donga. Gni-gipa, bi'sani ku'sikko rongtale rakina nanga maina moilarang dongode parirang ong'katgen. Gitangipa, indakgipa parirang dongode potas-sium permanganate solutionko on'tisa kilchapo sim'e, ku'sikko simsake su'srangbo.

Dal'gimin mandeni ku'sik ning'o ba sreo

parirang dongode potassium permanganate solutionchi ku'sripe galna nanga. Kanta gitamgitamprako indake dakode namgen. Ku'chilopari dongodezincoioxideoinment-kosalprakocl anggni nongode namgen Ku'sik ning'o pari dake samitingo miko nom'e seng'e cha'na nanga maina mi nom'ode pari namningbatg' n aro jalikko ba na'-kamko cha'na nangja.

### OKNINGO DONGGIPA JO'ONGRANG

Okningo donggipa jo'ongrang bang'bea aro rokom rokom donga. Indiba is a'songo rokom brikosan ramram nikrongbata, chongmot' n :

1. Hook worm ( Jong'kilding )
2. Round worm ( Rendi rokomsa )
3. Whip worm ( Rendi rokomsa )
4. Tread worm ( Chongipa rendi )

1. **Hook worm** : Ia jo'ong kilding gita ong'a A'gilsak gimikon ia jo'ongko ramram nikrongbata. Ia a'songo indakgipa jo'ongrang bangbata mdnerango donga. Mitam manderang ia jo'ongko nikujanaba donga. indibaa'pal re'aoniko microscopechi niode ia jo'ongni bang'bea bitchirangko nikna man'gen.

(i) **Hook Worm Be'eno Maikai Napronga ?**

Ia jo'ongni be'enni ning'o napani ming gni cholrang donga : (1) Parirang gita an'chiona napa, (2) Cha'a ringao napa.

Ia jo'ongko man'gipa rrande burungo ba ramram biapo a'pal re'ode, uko mikka wadape ua bitchirangko ki'ionikogipin b'aprangonaman'.

pakange bang'bata biaprangona sualata. Unon an'senggipa mande ia biaprangomitingo, matgimin pari dongode ua pari gita an'chiona napanggen. An'chingni ja'dil gita re'ange kancho-kona sokanga, unonisa ka'sopona an'chi baksa re'ange, balwa rama gita sre ga'tongona re'baa. Unon ku'chi minokmitingom i-rama gita atomona re'ange kasne ka'sne bibikrangona sokanga. Bibikona sokahaode uano dongkae jelrroa. Indake ia jo'ongrang be'enona napangbata.

Basakoba basakoba cha.anirangni gimin simsakjaode ua jo'ongrang an'chingni cha'a ringanirang bgksa napronga.

## 2. Hook Wormni Saatani :

Bibiko dongmitingom ia jo'ongrang bibikni pakmarango chikkape donga aro pakmarangni an'ch ko salopa. Bang'bea jo'ongrang bibiko dongode bang'bata an'chikosalopgenaro jo'ongni bisi bang'bate an'chio napskagen.

(i) Jo'ongni bisi be'eno napahani gimin mande aratgen,

(ii) Ben'enni an'chi komibegen, ku'chil aro sre gipokgen,

(iii) Be'en bilgrigen,

(iv) Bi'sa ong'ode dal'ningjanaba donga,

(v) Badiaba manderango bang'bata jo'ongni bisi be'enon apode miksulgen aro mikdo nangnaba donga.

(vi) Jo'ongrang bang'beode aro ruutbee dongode mande bilgribee sinaba donga, ba ok re'achi ba gipin saarangchi sinaba, maina

mande bilgrimitingo gipin saarangko man'ning-bea.

(vii) Badiaba mandea ok aro ja'arang be'naba donga.

(viii) Mande ram'gen, mi cha'na sikjawa aro mitam a'mangko cha'na sikbenaba donga.

(ix) Ia jo'ong bigilni pari gita napmitingo parirang ka'kitbegen. Ja'si-gitok be'arango aro ja'si gisepni parirango ia jo'ongrang napningbata.

(x) Basakoba mi cha'mano ok chika.

(vi) Basakoba a'pal re'anoniko niode ia jo'ongrangko nikgen.

## 2. Hook Worm ( Rendi chongipa ) Saako chamɿengani :

(i) Burungrango ramram a'pal're'gija paikanarango a'pal re'na nambatatabea. Song imik-na rikgimin paikana dongjaode nokprɿkprak an'tangtangna rike jakalode namgen, paikana a'kolko tu'e cho'oba a'pal reanti a'ginchi ba a'mangko pudapode namgen, maina uano tampi ba'na man'jawa ara seengeba komikalgen.

(ii) Ja'arango pari dongode uarangko bangbang watgija samko nonge ba samchi so'e uarangko ba'rachi kadapode nambatgen.

(iii) Cha'anirangko rongtale cha'na nanga, maina cha'anirango ba jakrango moila dongode uarango jo'ong b'tchirang dongnaba donga.

## 4. Hook Worm Saako Namatani Cholrang :

(i) Akaru bitchriko jakkepsa ra'e uko sukninge chi pialasao walgimik dim'e donna nanga.

Pringo mi cha'na skang ua cliko ringna aro bitchrikoba cha'na nanga. Iako cha'ani kanta gnini ja'mano julapko ringna nanga. To ghang-gipa julapko ringgija gipin jnlap ( Mag supko ) ringna nanga. Julap ringani ja'mano chiko bang'e ringna nanga aro atomona kingking mi cha'gija dongna nanga.

Ia samko ringani ja'mano mitam jo'ongrang dongkuengode antigipino apsan ringtaina nanga.

## 2. Round Worm (okningo donggipa kanchuri rendi ) :

Ia jo'ong ro'a, krusamang ong'a, aro a'ani ramram kan'churi gita dal'a, indiba ua boka Ia jo'ong atomni sepangbatgipa b bik'ango donga. Bipa aro bima dongronga. Jo'ong bimao b tchi bang'sranga aro salprako hajal hajal bitchirangko chi'a. Sagipani a'pal-re'ako ra'e microscopechi niode ia jo'ongni bitchirangko nikgen. Ia jo'ong dal'arangona bate bi'sarango bang'batedongronga.

### (i) Ia Jo'ong Be'eno Maikai Napchenga ?

Ia jo'ongna an'chingai be'eno napna chol mingsasan dongaia, chong'motan, cha'a ringa-nichi naprongbata. An'chingni cha'a ringa gita ia jo'ong an'chingni be'eno naprongoba song-gimin ba ritgimin cha'ani gita napna man'ja, maina song'mitingo ba ritmitingo jo'ongni bitchirang bo'ola. Indiba gitting cha'amitingo ba jako moila ghang cha'mitingo ia jo'ongrangni bitchiko cha'e napmannaba donga. Jo'ong bitchiko cha'chapon bibikni bitchirang jo'ong bik-apni bitchiko jrongata aro unon jo'ong bitchirang pe'e bi'sa ong'a.

**(ii) Round Worm Saako Uiani Cholrang :**

Ia jo'ongko uiani cholrang hook wormo janapgimin cholrang gita apsan ong'enga, indiba a'pal re'anio dal'gipa jo'ongko niknaba donga. Ia bi'sani okningo dongode bi'sarang walo wagam chikkrotgen aro basakoba basakoba matri saa gita onngen.

A'pal re'a jo'ongko nikjaoba ua a'pal-re'ako ra'e microscopechi niode ia jo'ongrangni bitchiko a'pal-re'anio nikgen.

**(iii) Round Worm Saako Champengani Chol :**

(a) Cha'ani gimin simsakna nanga maina ia jo'ong mandeni ku'sik gitasan napronga.

(b) A'pal-re'anini gimin simsakna nanga, maina ia jo'ongni bitchi sagipani a'pal-re'anio bang'sranga, aro mikka waachi ba balwachi balpakange a'gimikna gipatronga.

**(iv) Round Worm Saako Namatani Chol :**

Ia jo'ongko gimaatna Santonin samko jak-kale ja'mano julapko ringode nambatgipa chol ong'a. Santonin dongjaode hook wormna janapgimin gita akaru bitch lko jakalba.

**3. Whip Worm :**

Ia saani hook wormni saa gita chacha, indiba jo'ong aro uni bitchi dingtang ong'a.

**4. Tread Worm :**

Ia jo'ong gipin okningo donggipa jo'ongrangna bate chonbara Iani dal'a kilding gita ong'a aro ki'sangkolo dongronga.



**(i) Thread Worm An'chingni Be'eno Napani Cholrang :**

Ia jo'ong cha'ani baksa ku'sik gita napronga indiba ua ki'sangkolchi re'ange uno dongronga.

**(ii) Thread Worm Saako U'iani Cholrang :**

1. Ki'sangkol ka'kitbegen, walo ka'kitbata.
2. Bang'beode ki'sangkoloni ningchi napdoanga. Unon ok chikbegen aro ok sagen.
3. Bangbeode mande cha'na sikjawa.
4. Ka'kitana tusina man'jae be'en ram'begen  
aro bi'sa ongode grapninggen.

5. Chongipa jo'ongrang ong'oba uko a'pal re'anio nikgen.

**(iii) Thread Worm Saako Champengani :**

Gipin jo'ongrangna janapgimin cholrang baksa apsan ong'a.

**(iv) Thread Worm Saako Nomatani Cholrang :**

1. Quassia samko chio sim'enba chiko ki'sangkolchi rubber tube-chi sikatna nanga.
2. Ki'sangkolko namedake rongtale rakina nanga. Carbolic sabonchi su'srangode namgen.
3. Bilakgijagipa carbolic oinmentko jakkalode nama.

8774.  
15.4.96  
Sane